

Migration of immune cells from the periphery to device with time post implantation

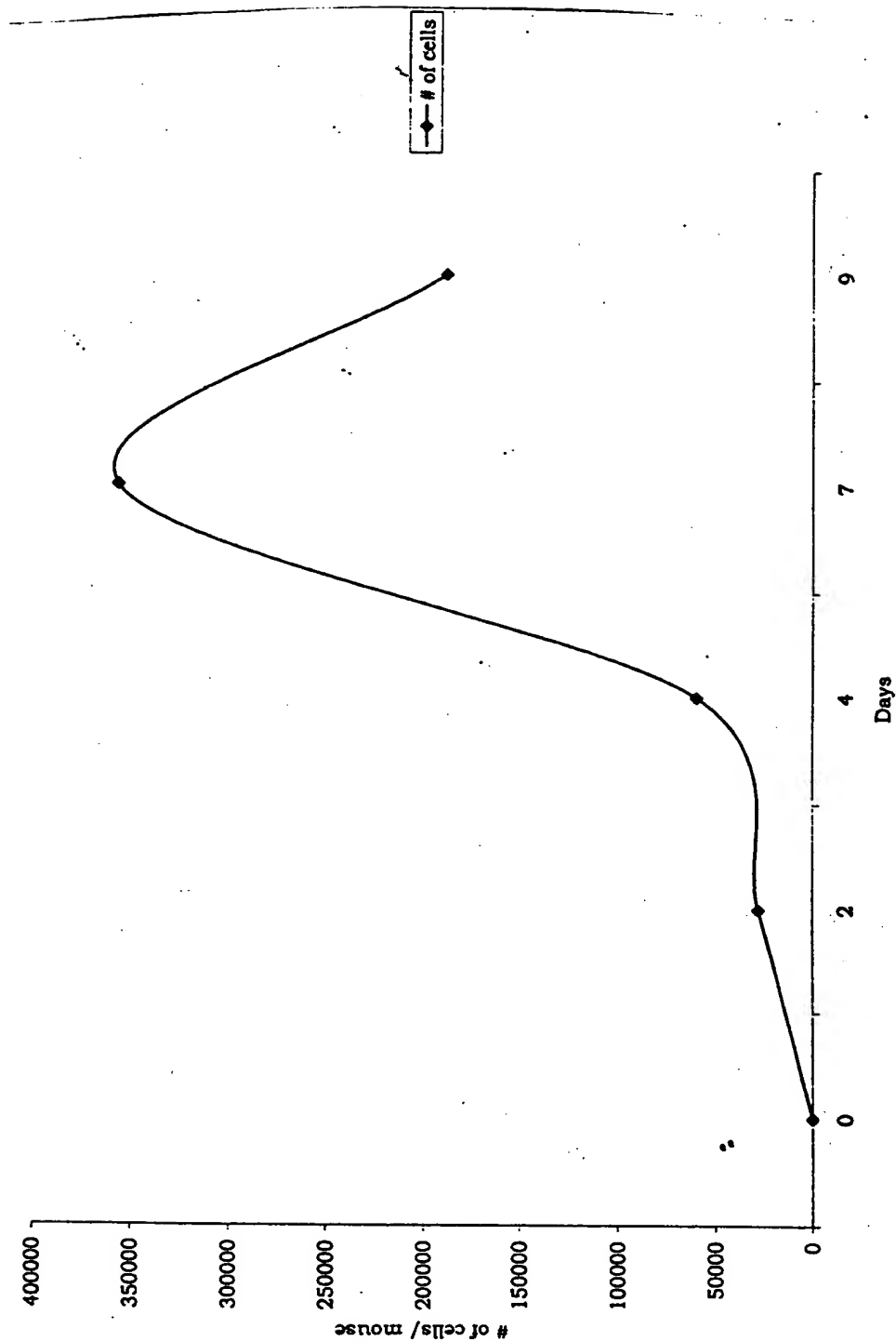


Figure 1

Migration and accumulation of immune cells in device 4 days post insertion as compared to naive mice PBMC

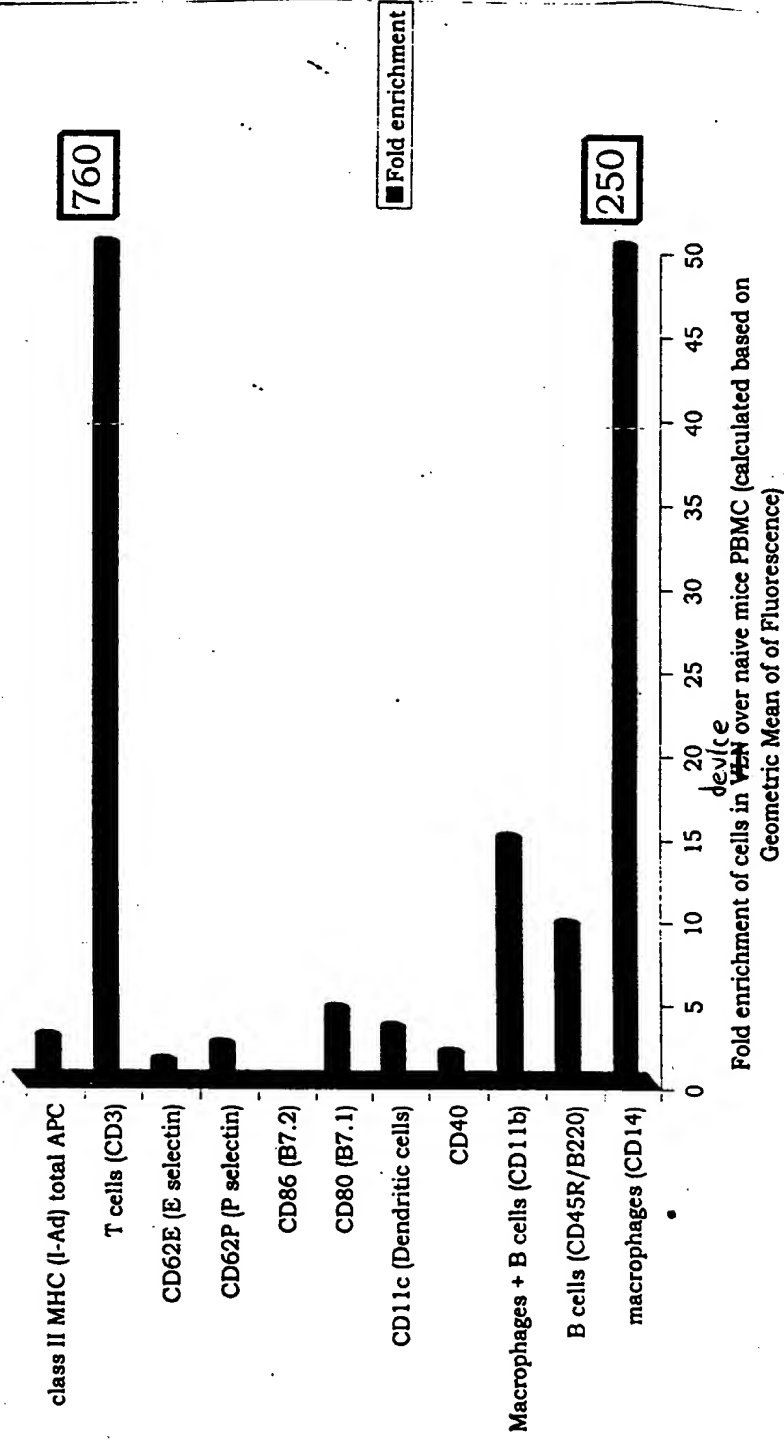


Figure 2

Phenotype of cells aspirated from the device at various days post implantation (lymphocyte gate)

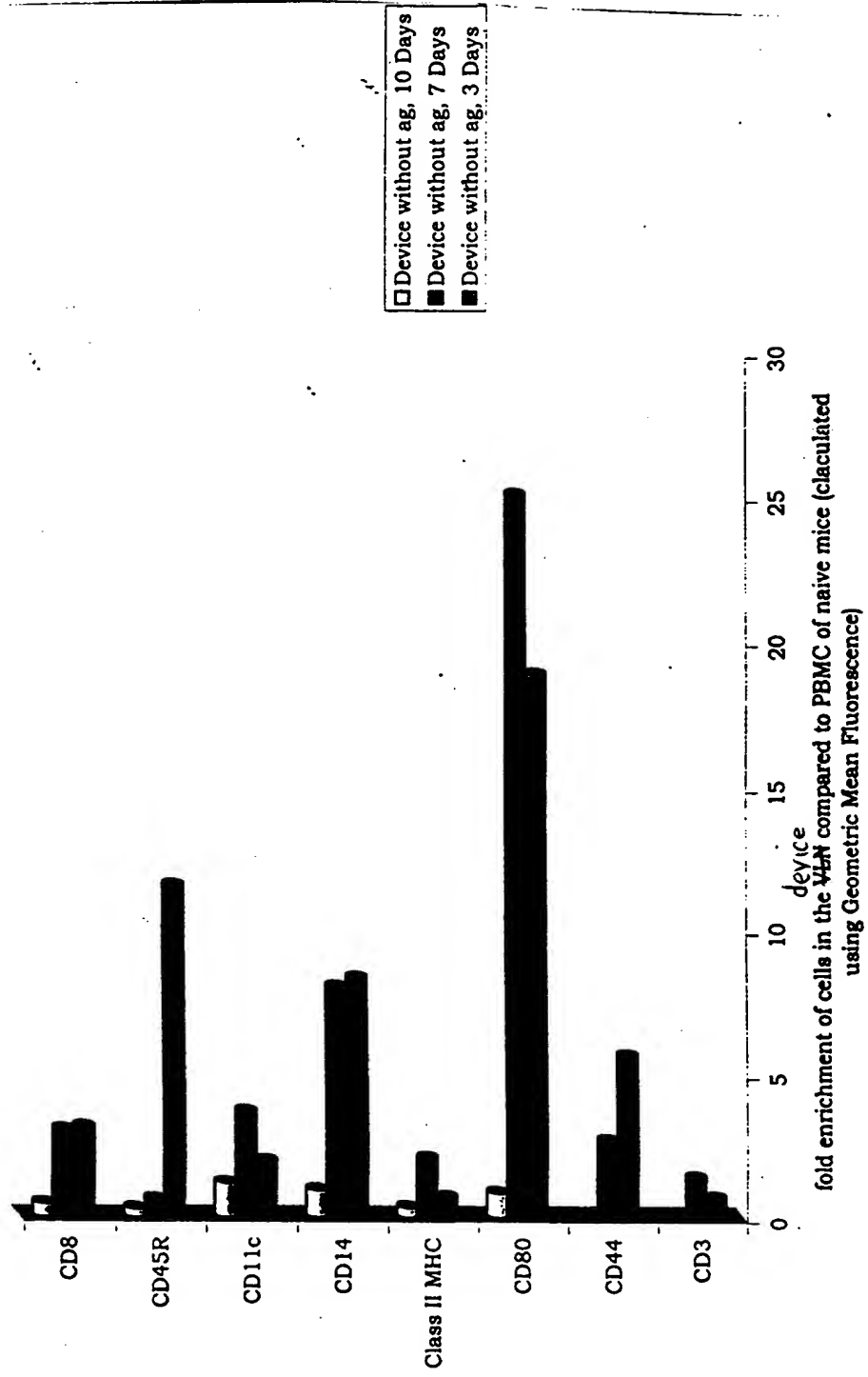


Figure 3

Intra-device immunization induces further augmentation of CD3, CD80 and CD14 bearing cells as well as extending their inhabitation in the device

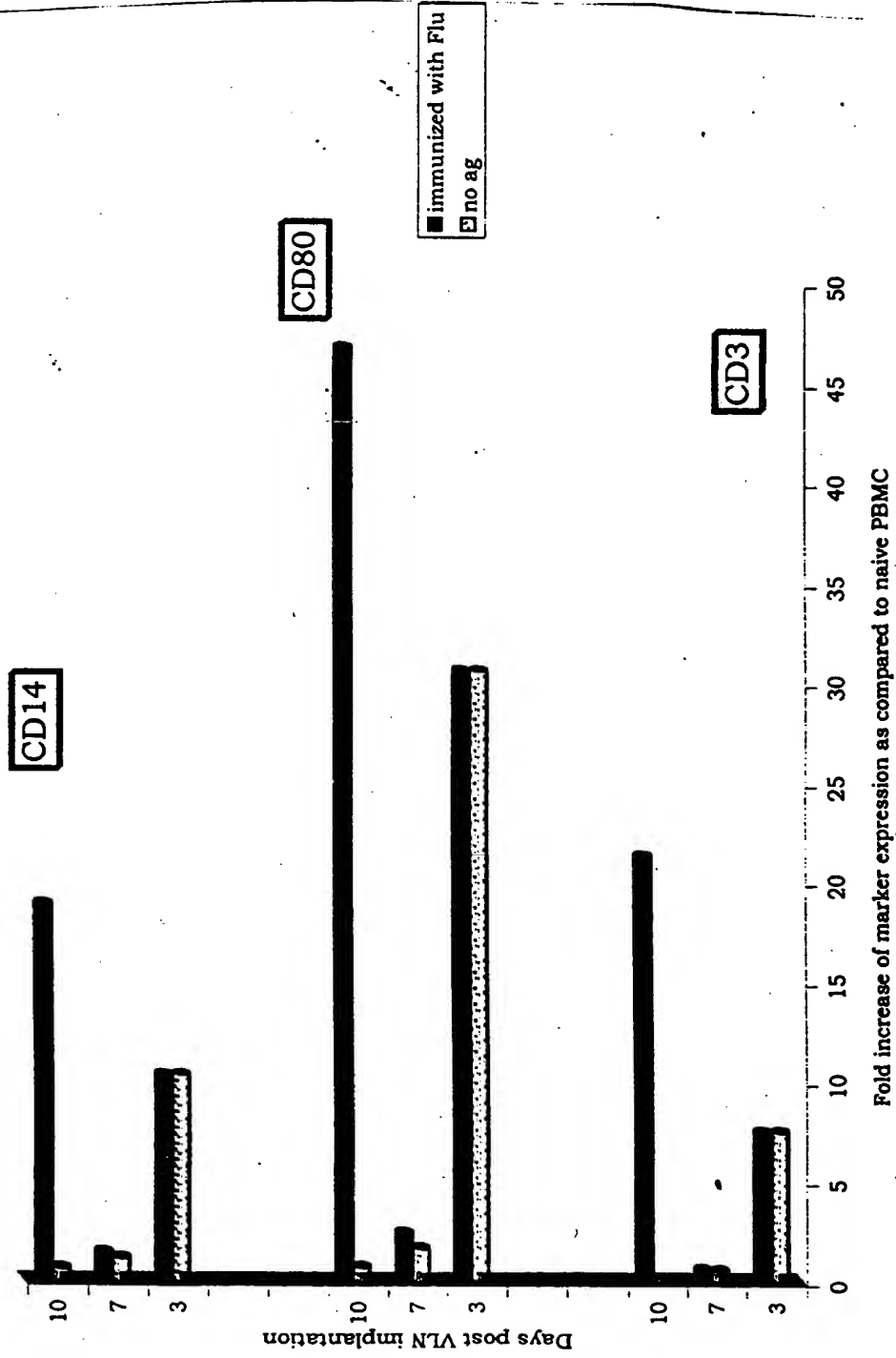


Figure 4

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Modulation of CD4 and CD8 expression on spleen cells following intra-device immunization with Flu antigen

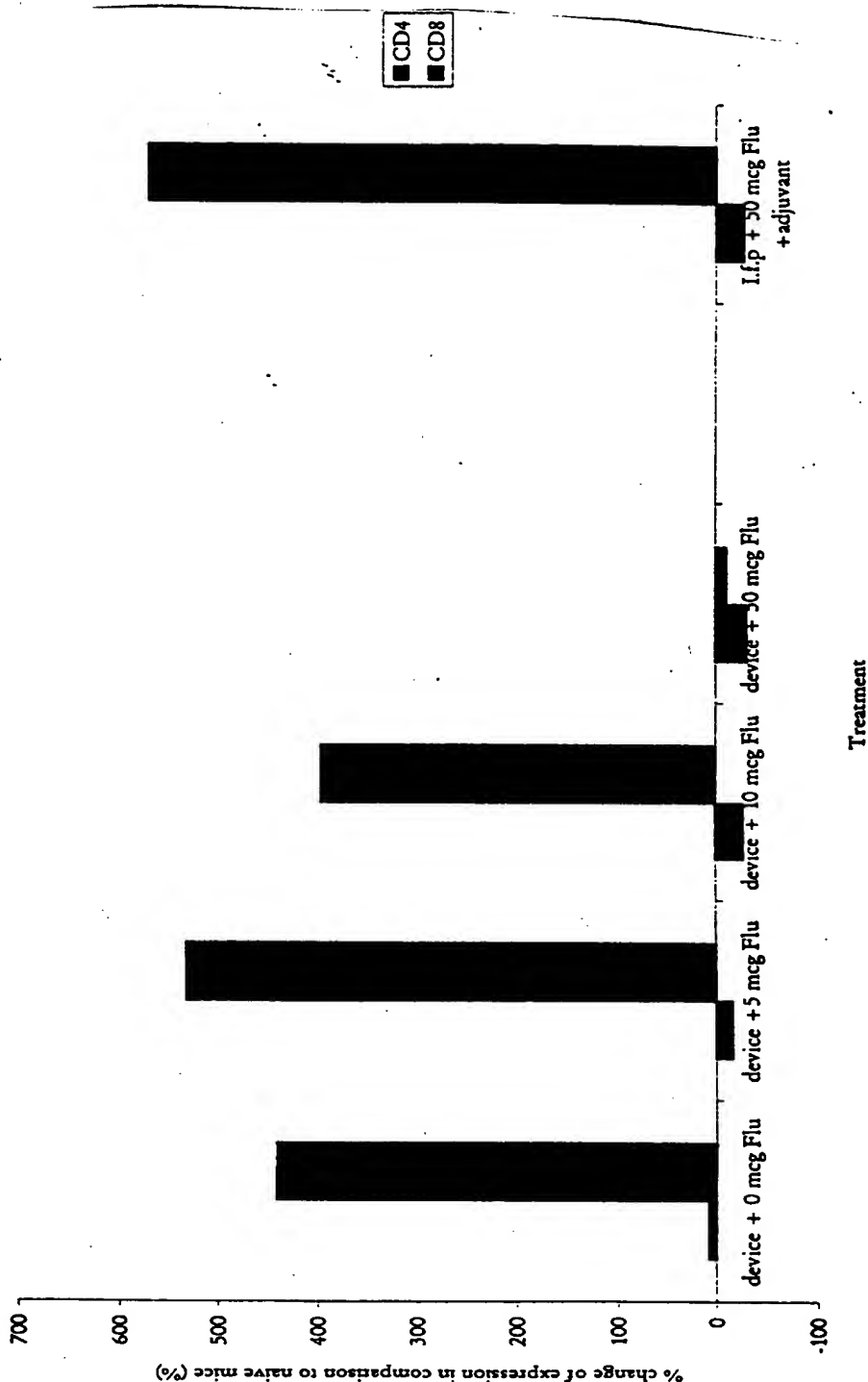


Figure 5

Gamma Interferon secretion by spleen cells from Balb/c mice following a single intradevice immunization with Flu antigen in the absence of adjuvant

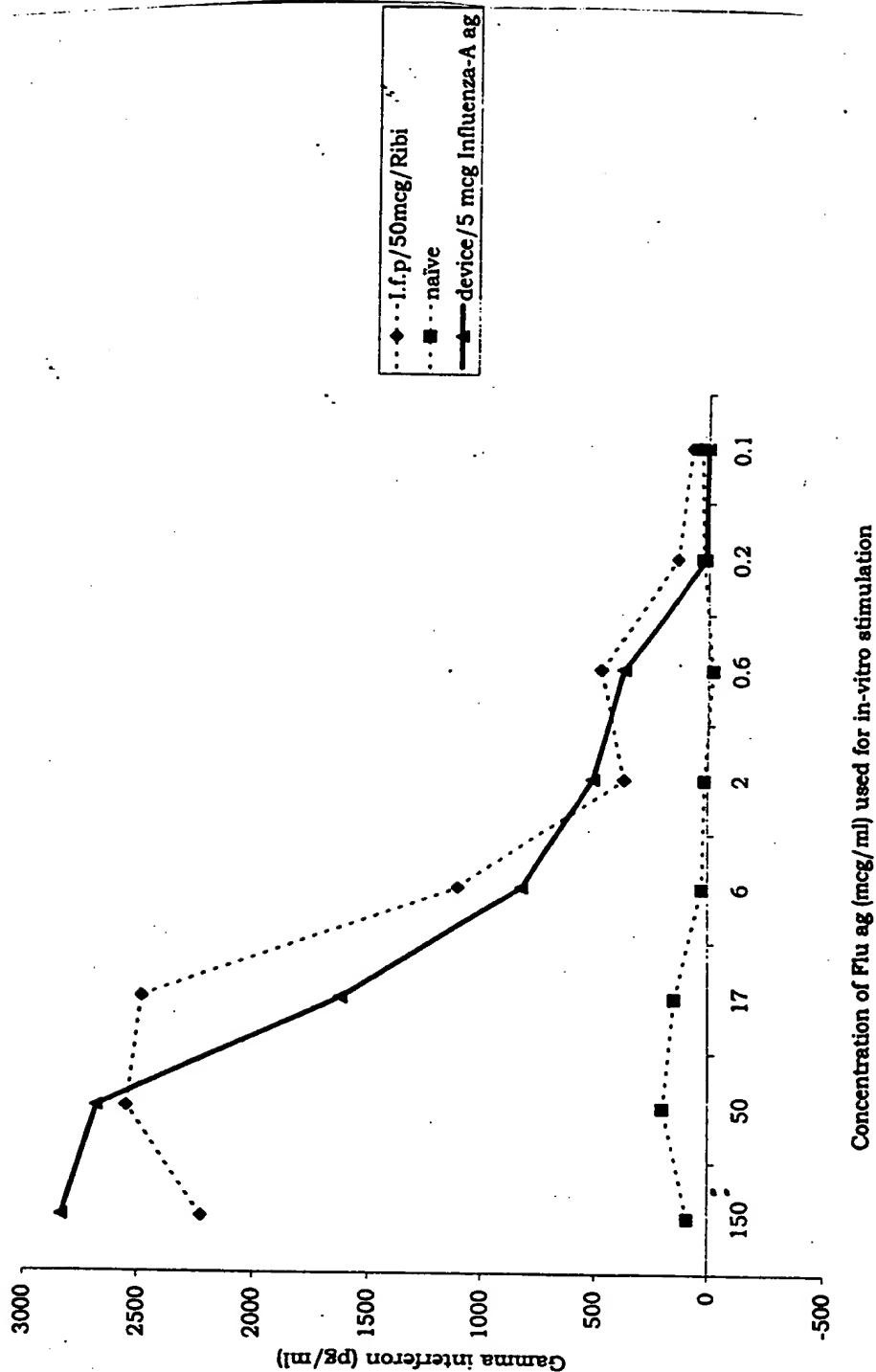


Figure 6

IFN- γ secreted by popliteal LN derived T cells following I.f.p
immunization of Influenza-A (50 μ g) in the presence of adjuvant
(Ribi)

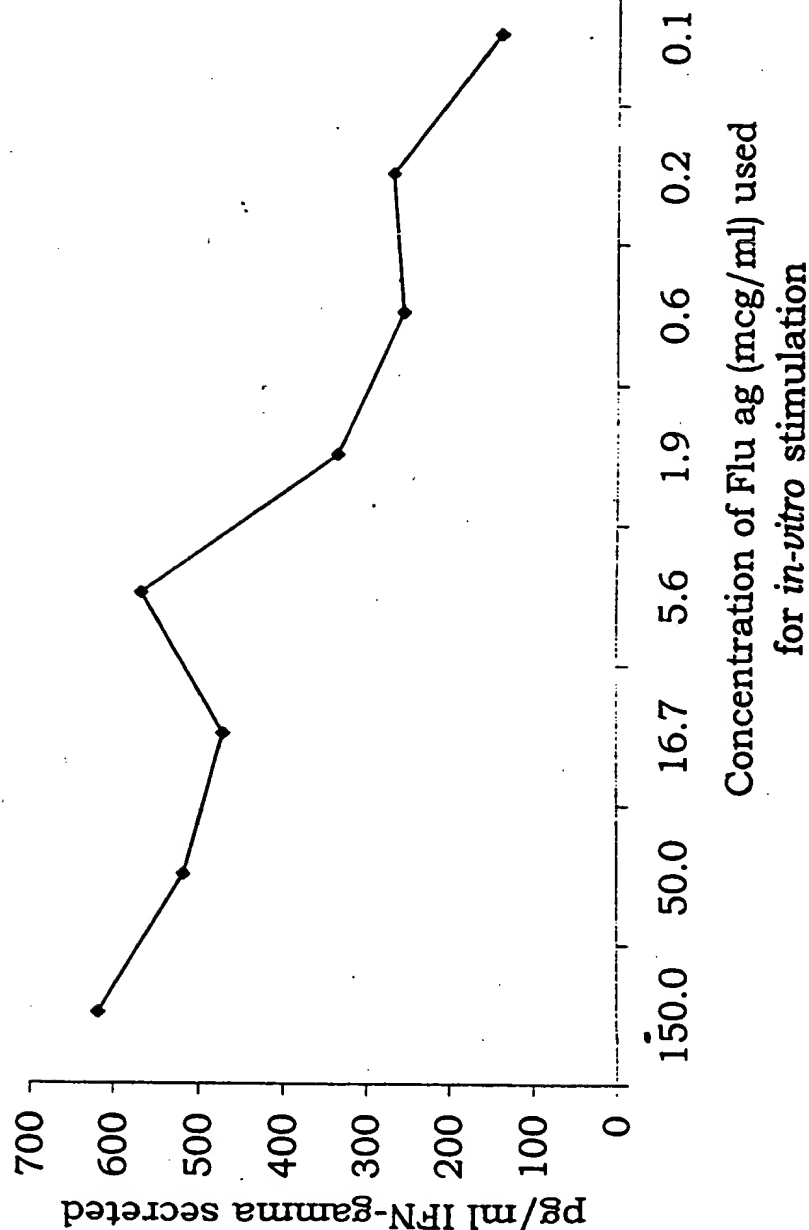


Figure 7

IFN- γ secreted by cells aspirated from the device in response to Influenza-A ag, 10 days
post intra-device administration of Influenza-A antigen

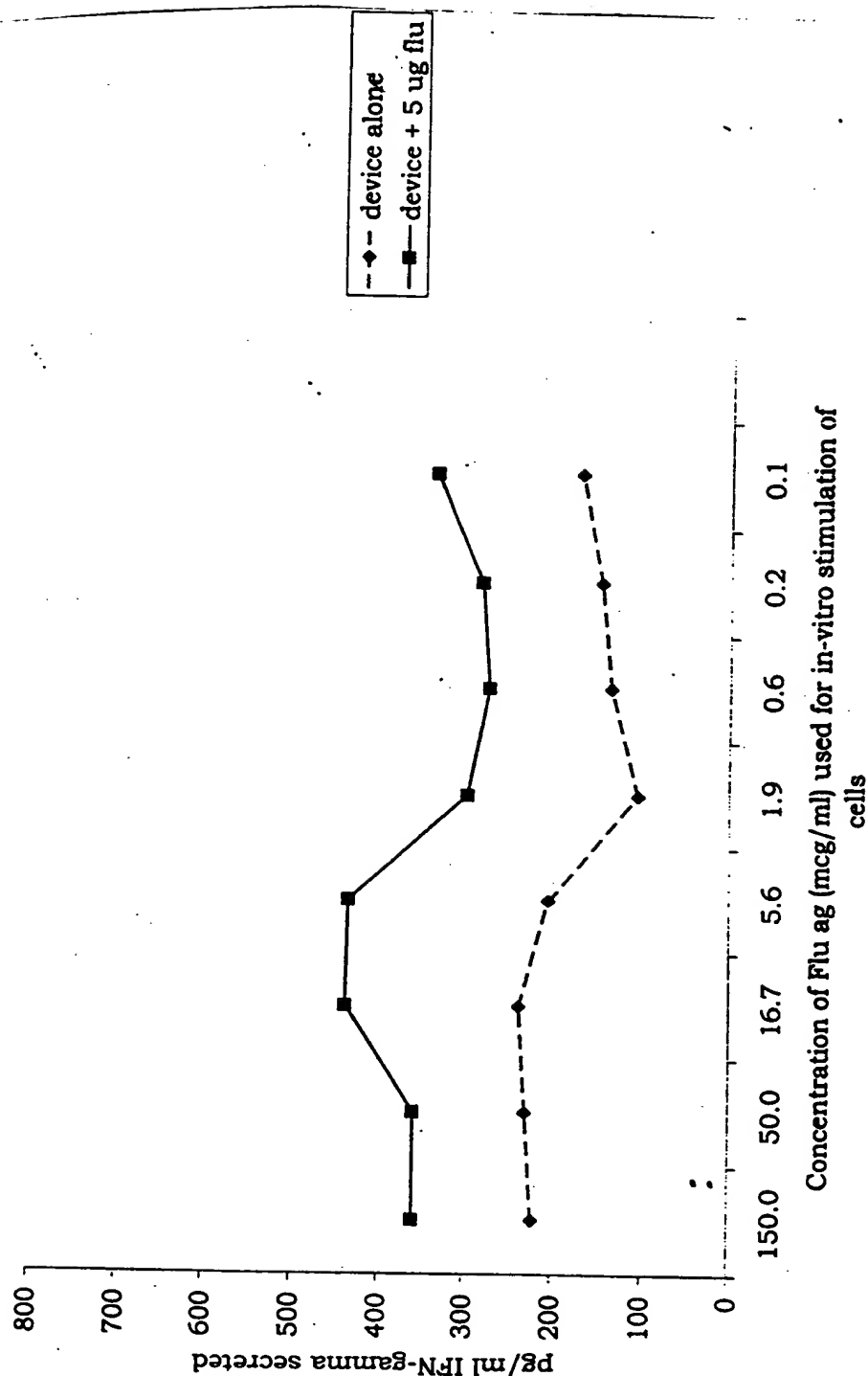


Figure 8

Proliferative response of spleen cells from C57Bl/6 mice immunized with OVA

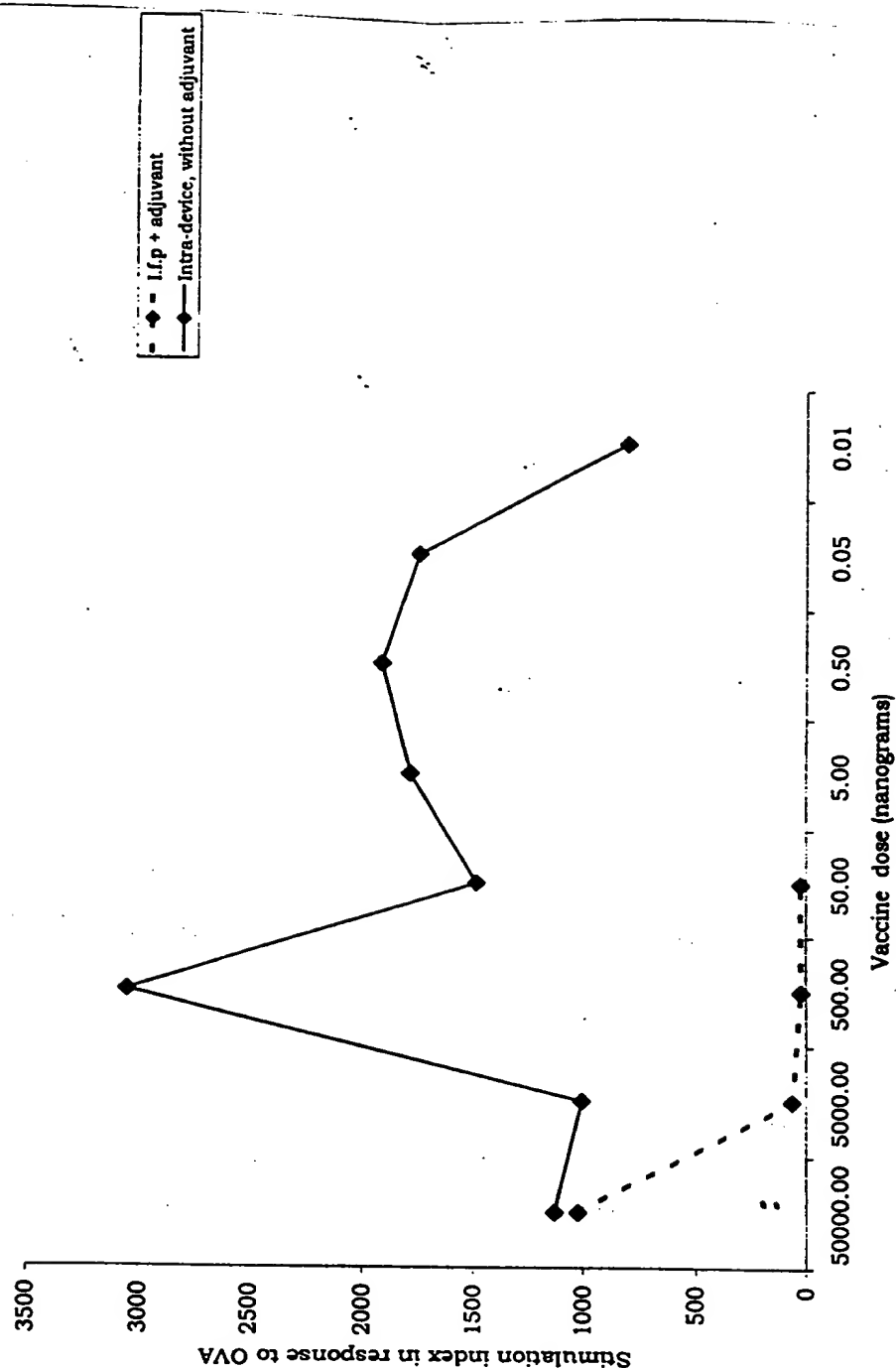


Figure 9

Proliferative response of spleen cells to OVA following a single intra-device immunization in the presence or absence of adjuvant

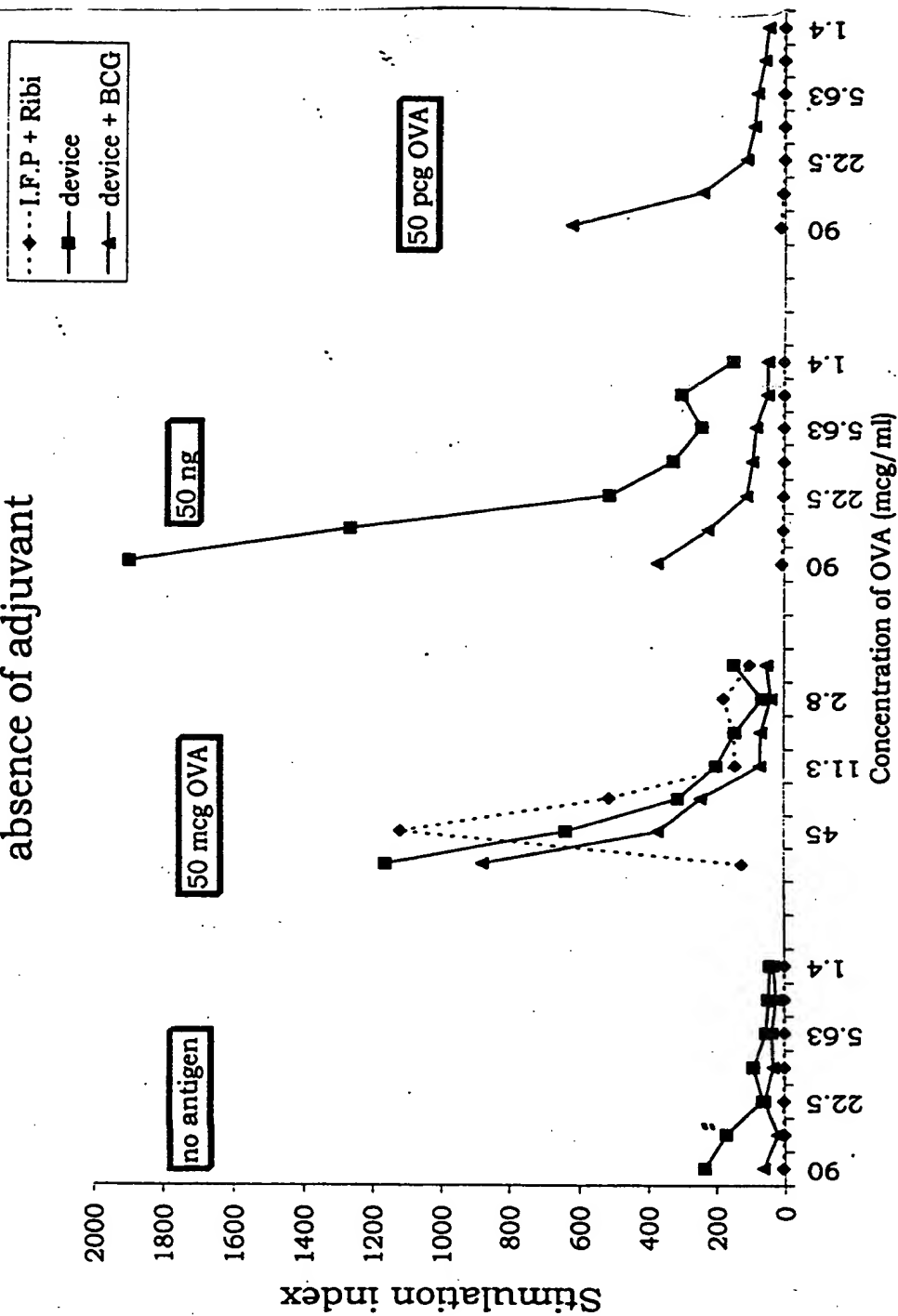


Figure 10

Development of antibody response to HIV gp120 peptide following a single intra-device immunization

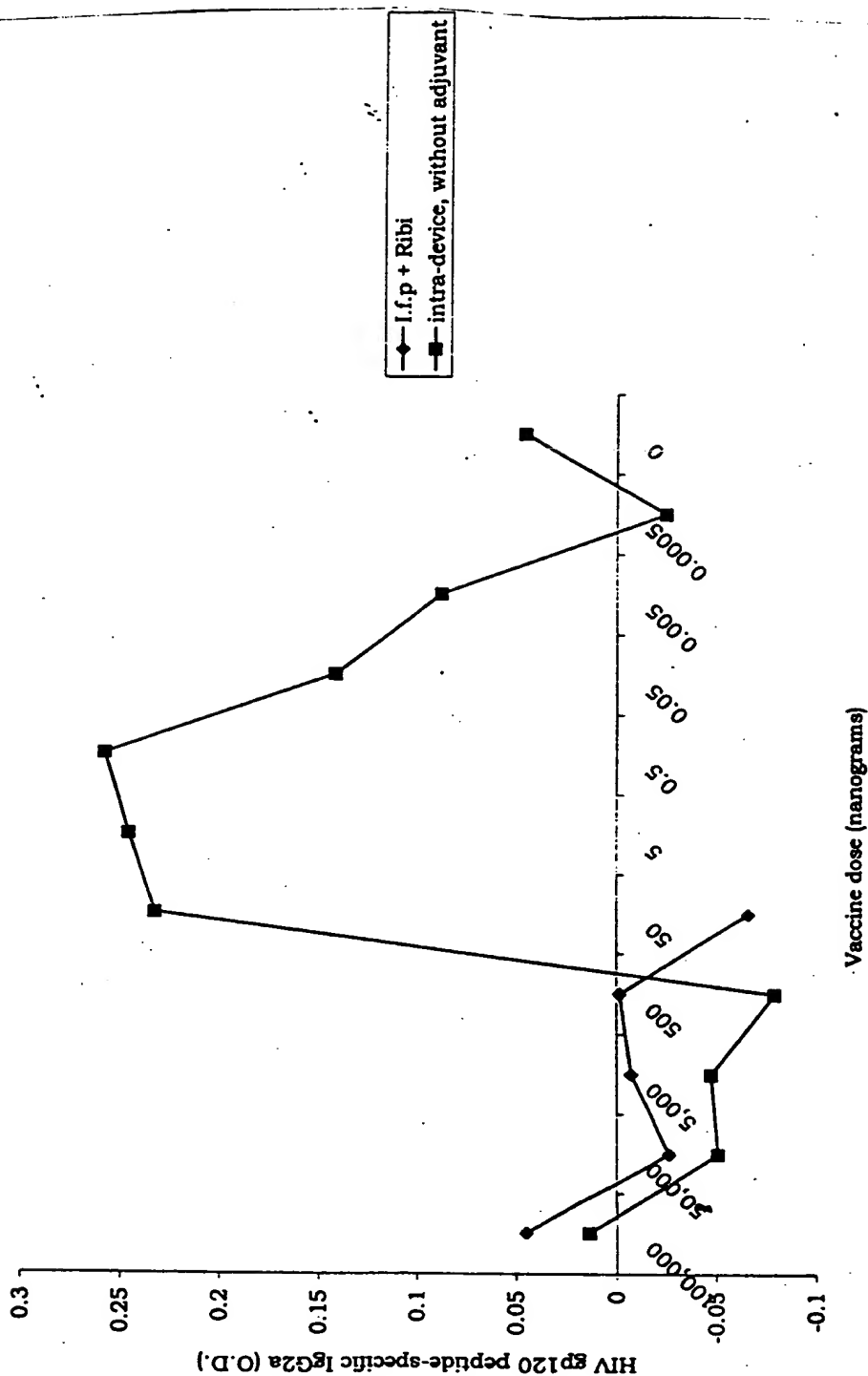


Figure 11

The graph displays the HIV peptide-specific IgG2a (O.D.) on the y-axis (ranging from 0 to 0.7) against the Vaccine dose (nanograms) on the x-axis (logarithmic scale: 100,000, 50,000, 5,000, 500, 50, 5, 0.5, 0.05, 0.005, 0.0005, 0). Two data series are plotted: I.f.p + Ribi (diamonds) and Intra-device, without adjuvant (squares).

Vaccine dose (nanograms)	I.f.p + Ribi (O.D.)	Intra-device, without adjuvant (O.D.)
100,000	0.16	0.30
50,000	0.17	0.31
5,000	0.11	0.24
500	0.08	0.21
50	0.07	0.20
5	0.06	0.19
0.5	0.05	0.18
0.05	0.04	0.17
0.005	0.03	0.16
0.0005	0.02	0.15
0	0.01	0.14

Figure 12

Development of HIV-specific antibodies (IgG2a) following a single intra-device immunization with HIV gp120 peptide (315-322, RIQRGPGRFVTIGK)

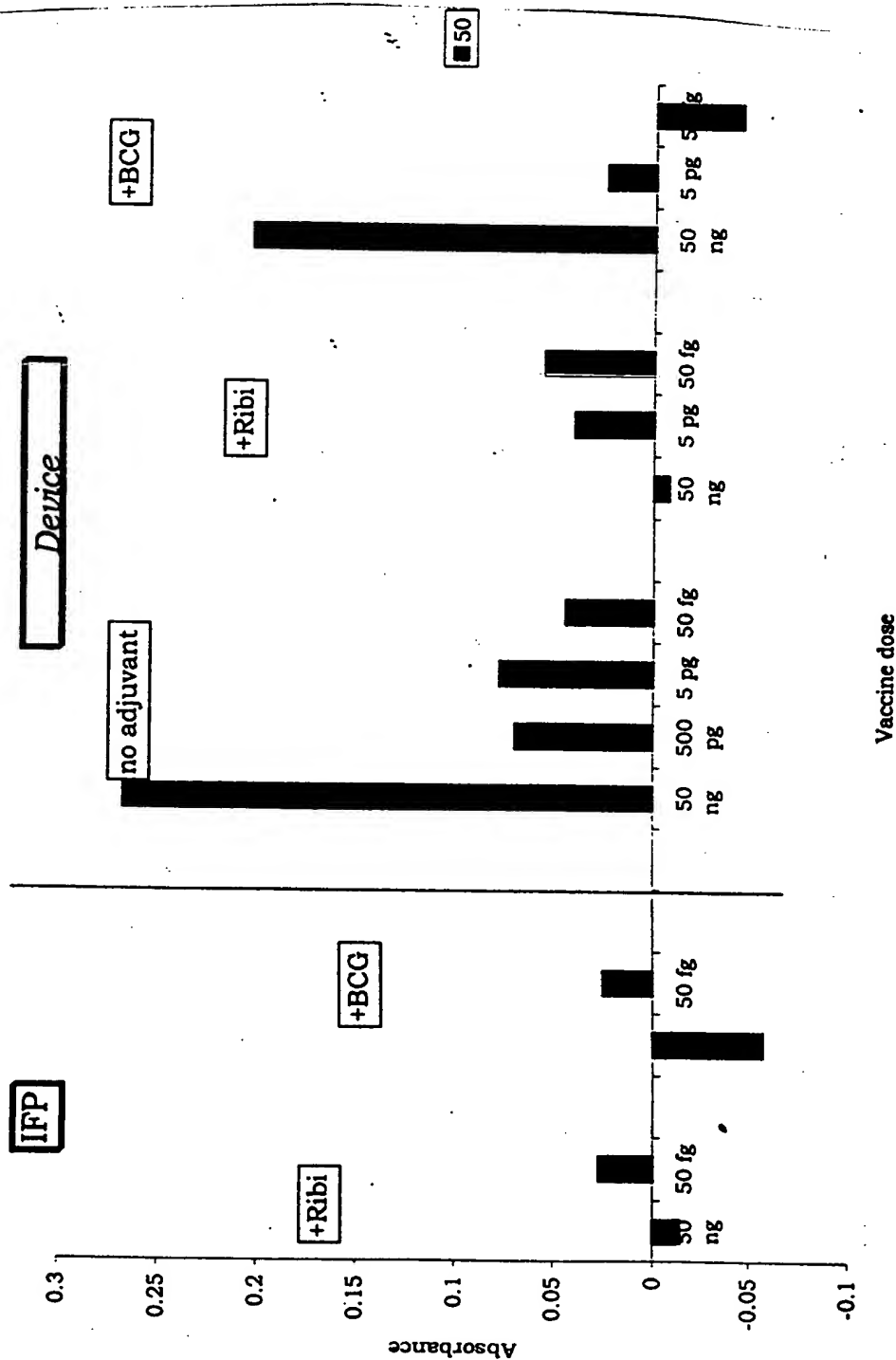


Figure 13

Cytochrome C-specific antibody (IgG2a) response following a single intra-device immunization in the absence of adjuvant

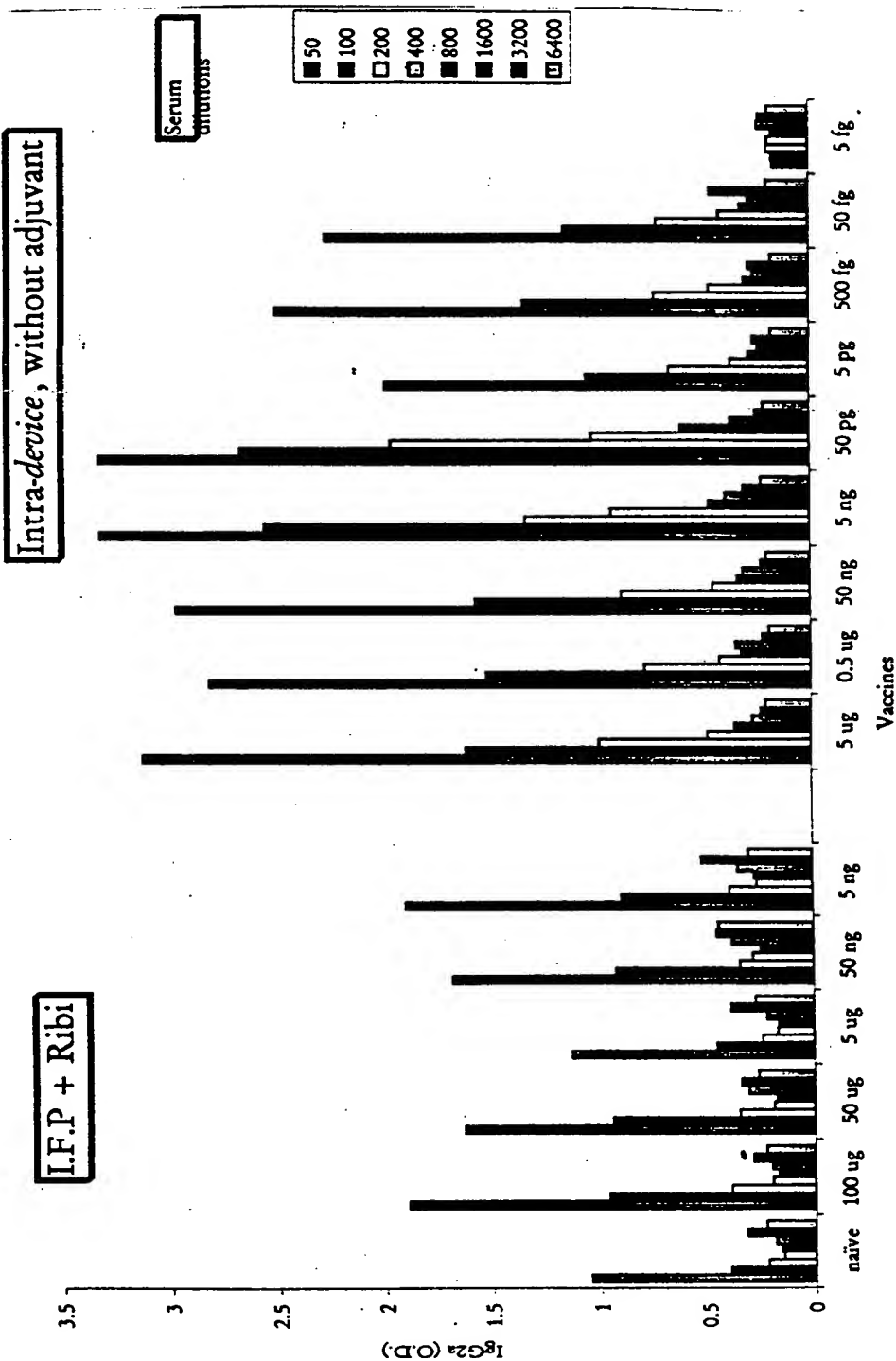


Figure 14

Development of anti-Influenza (PR8 virus) response following a single intra-device immunization with HA antigen in the absence of adjuvant

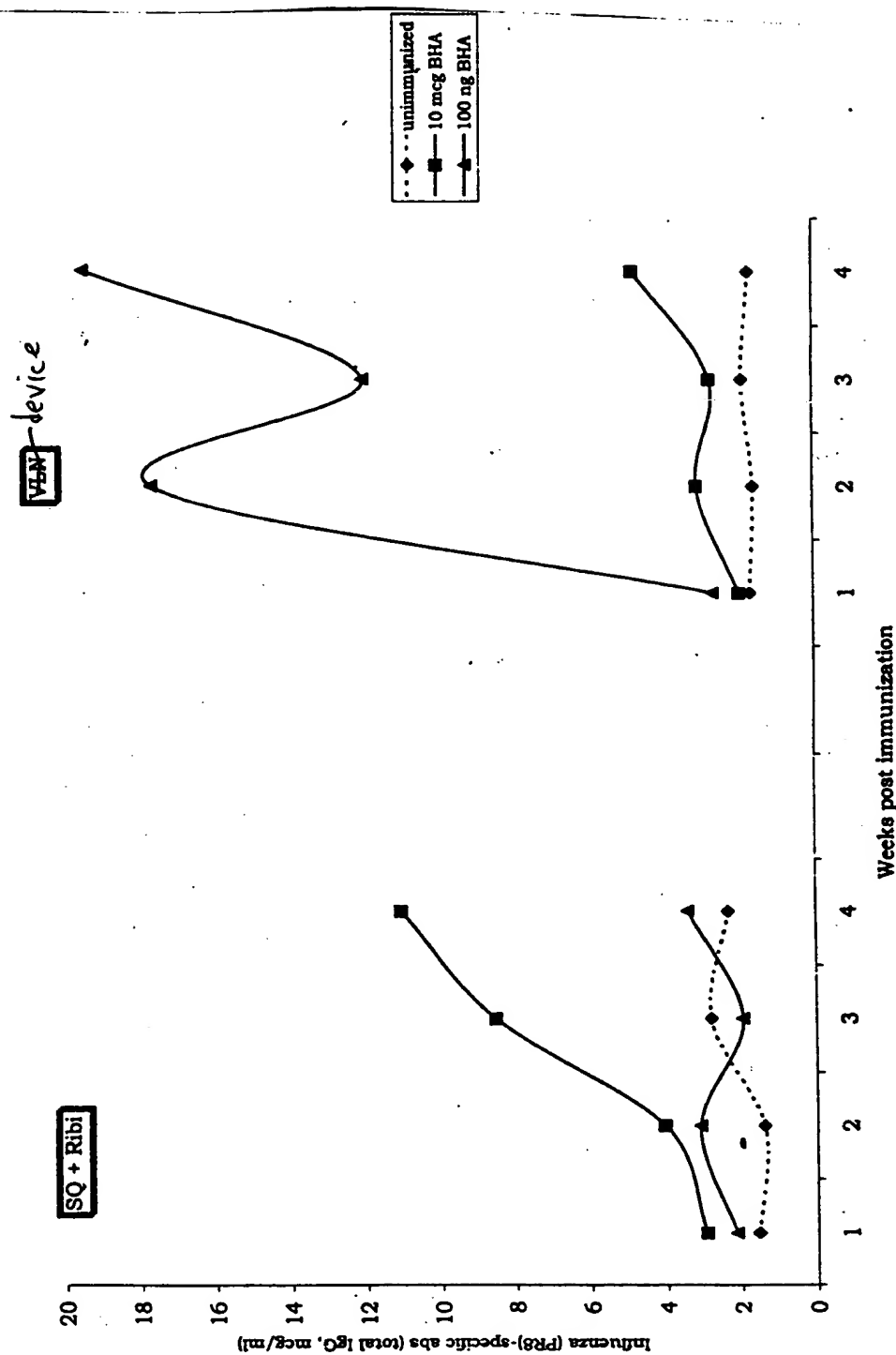


Figure 15

The tubing+sponge prototype of device is superior to the sponge alone in eliciting a proliferative immune response against Flu

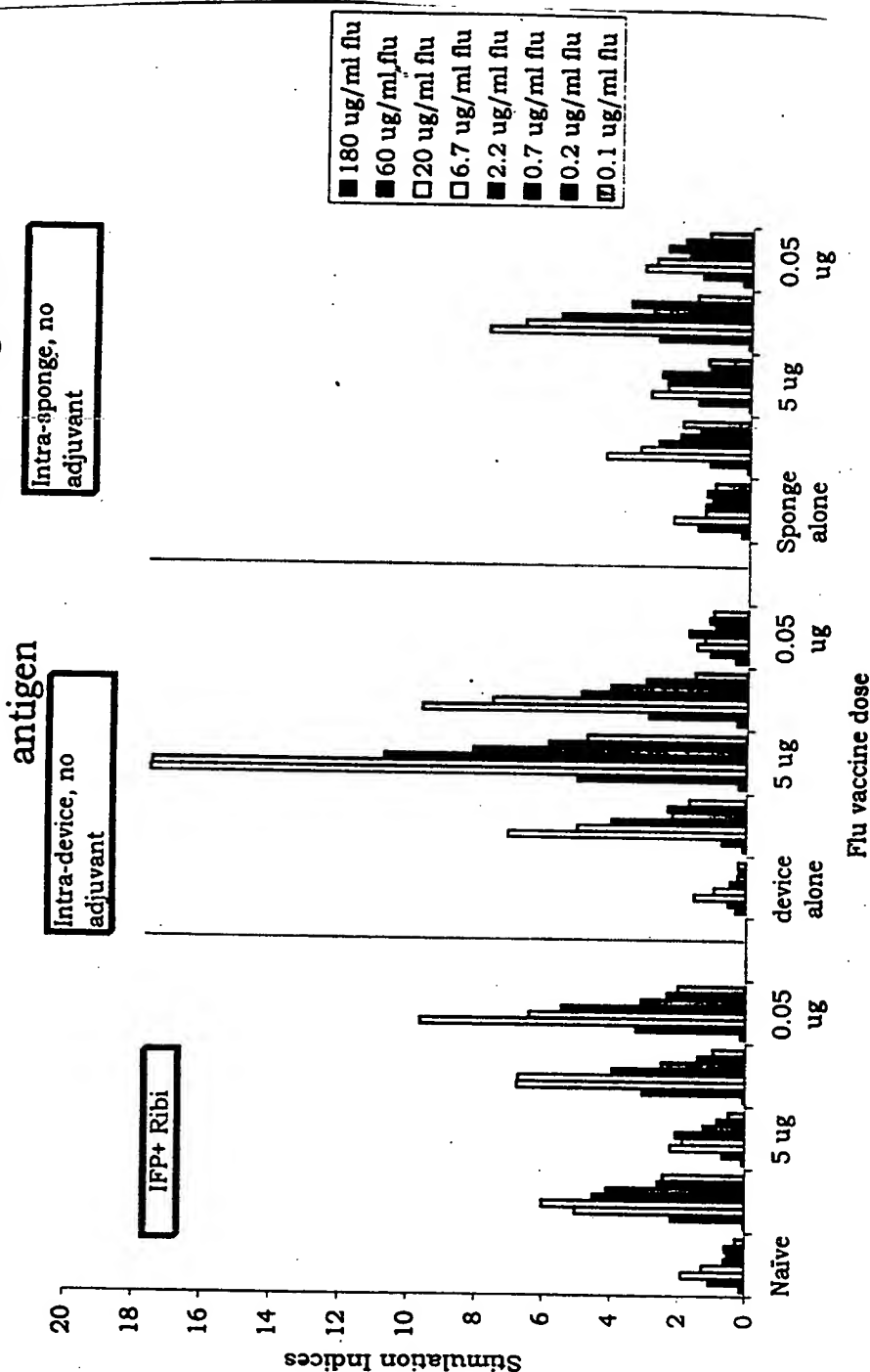


Figure 16

The tubing+sponge prototype of *device* is superior to the sponge alone in eliciting a proliferative immune response against Flu antigen (control graph: using EBV as unrelated antigen)

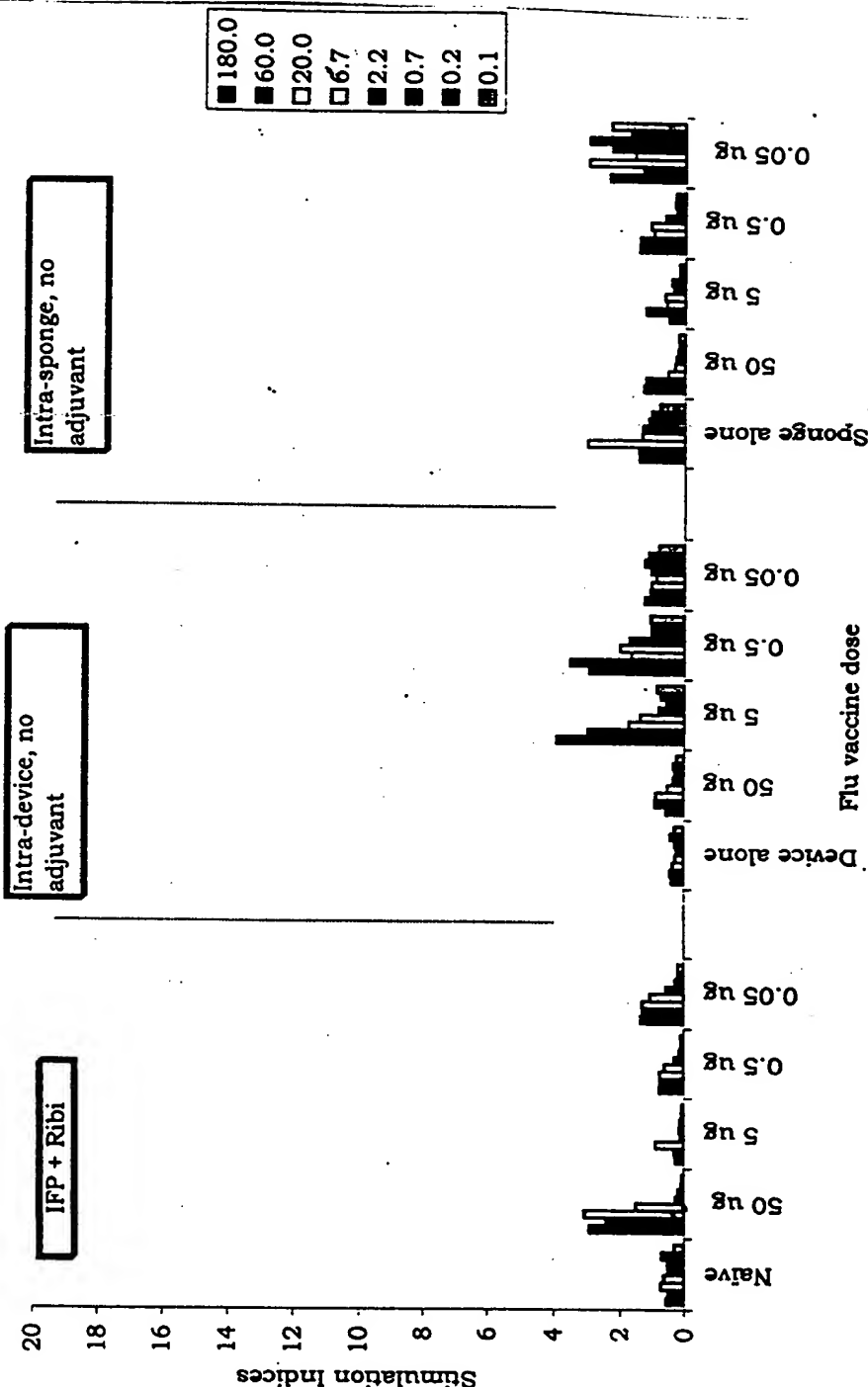


Figure 17

Diffusion of antigen from sponge as compared to device

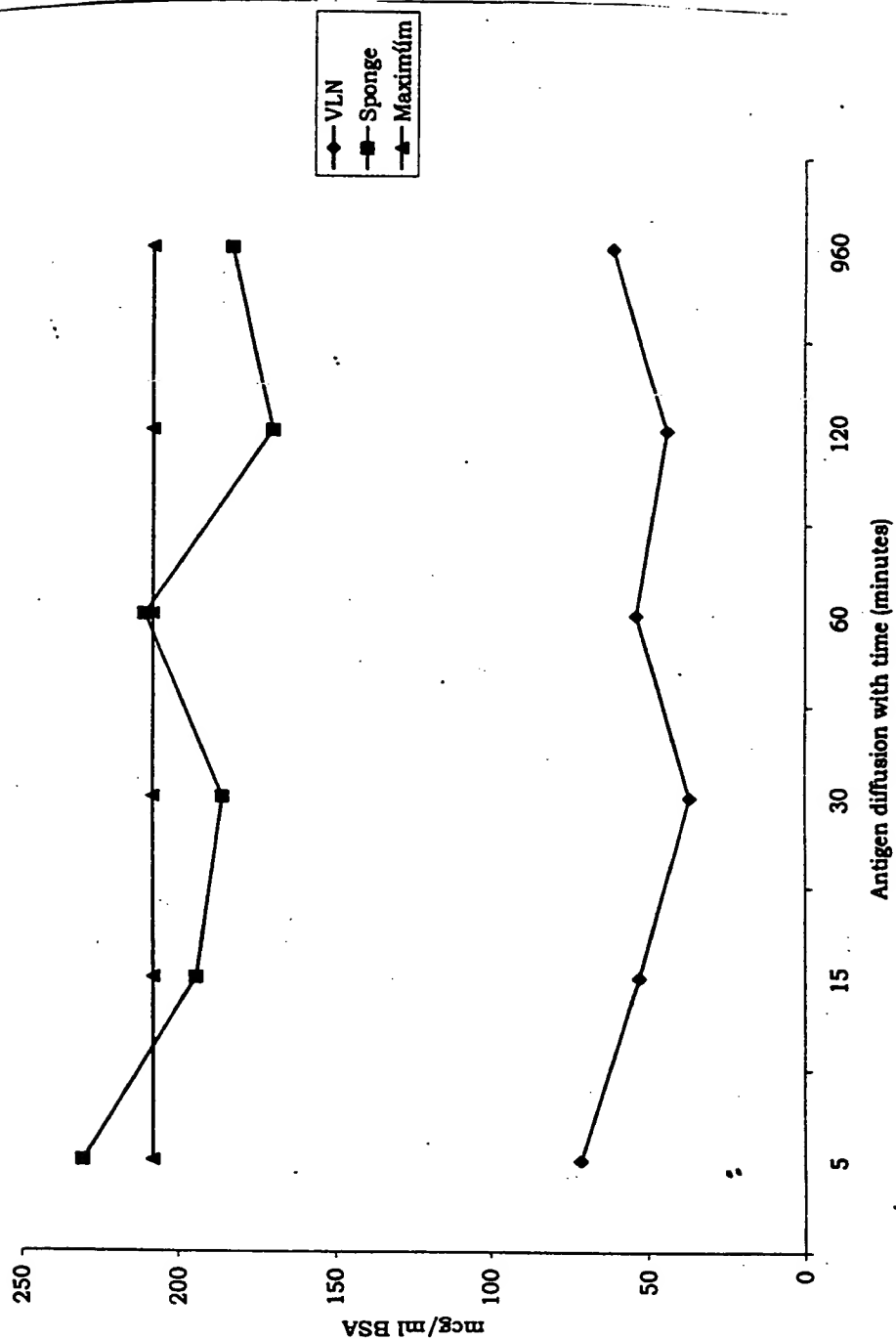
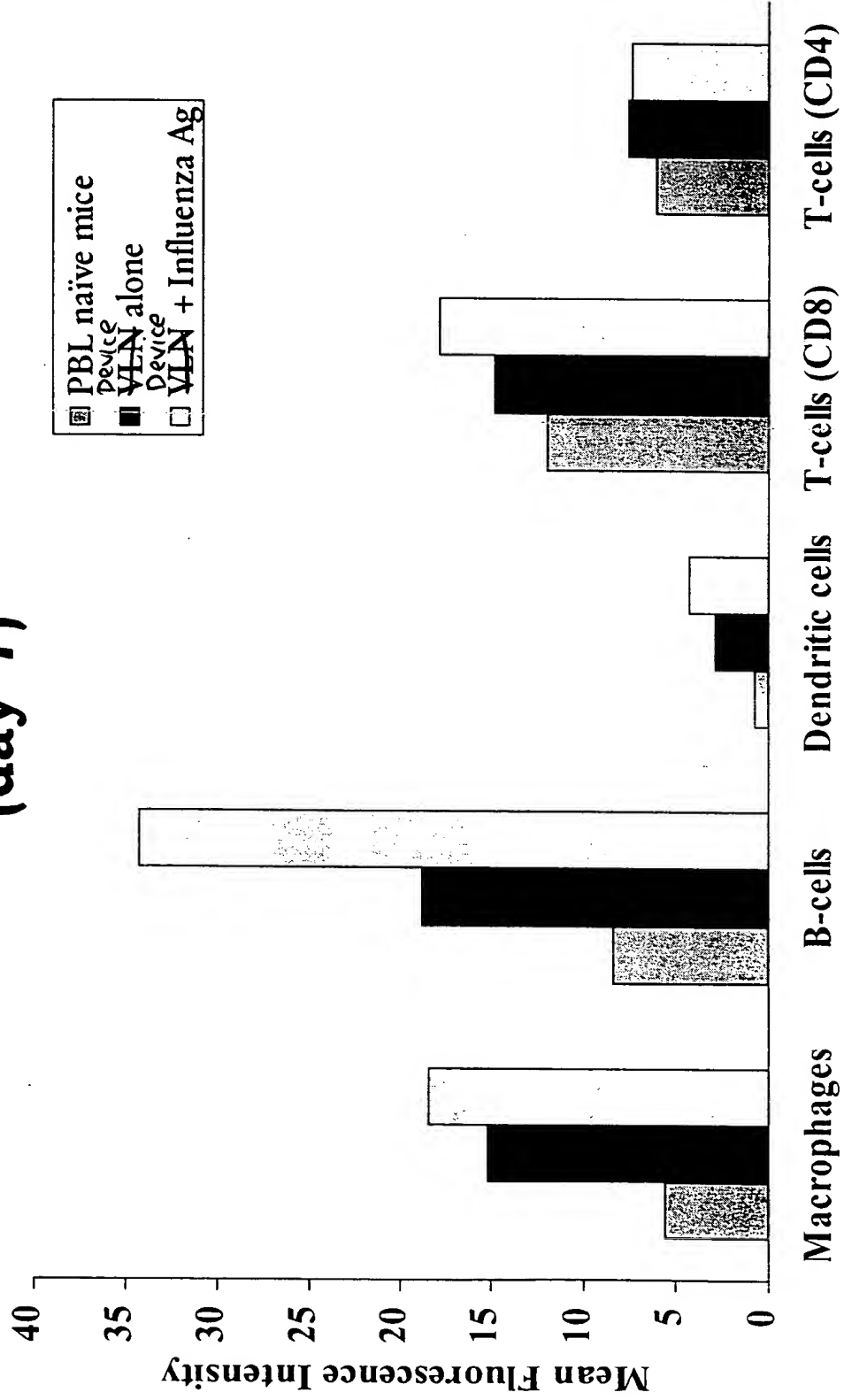


Figure 18

Cells Critical To An Immune Response Accumulate in the VLN Device (day 7)



The Microenvironment Of The VLN^{Device} Contains High Levels Of Stimulatory Cytokines

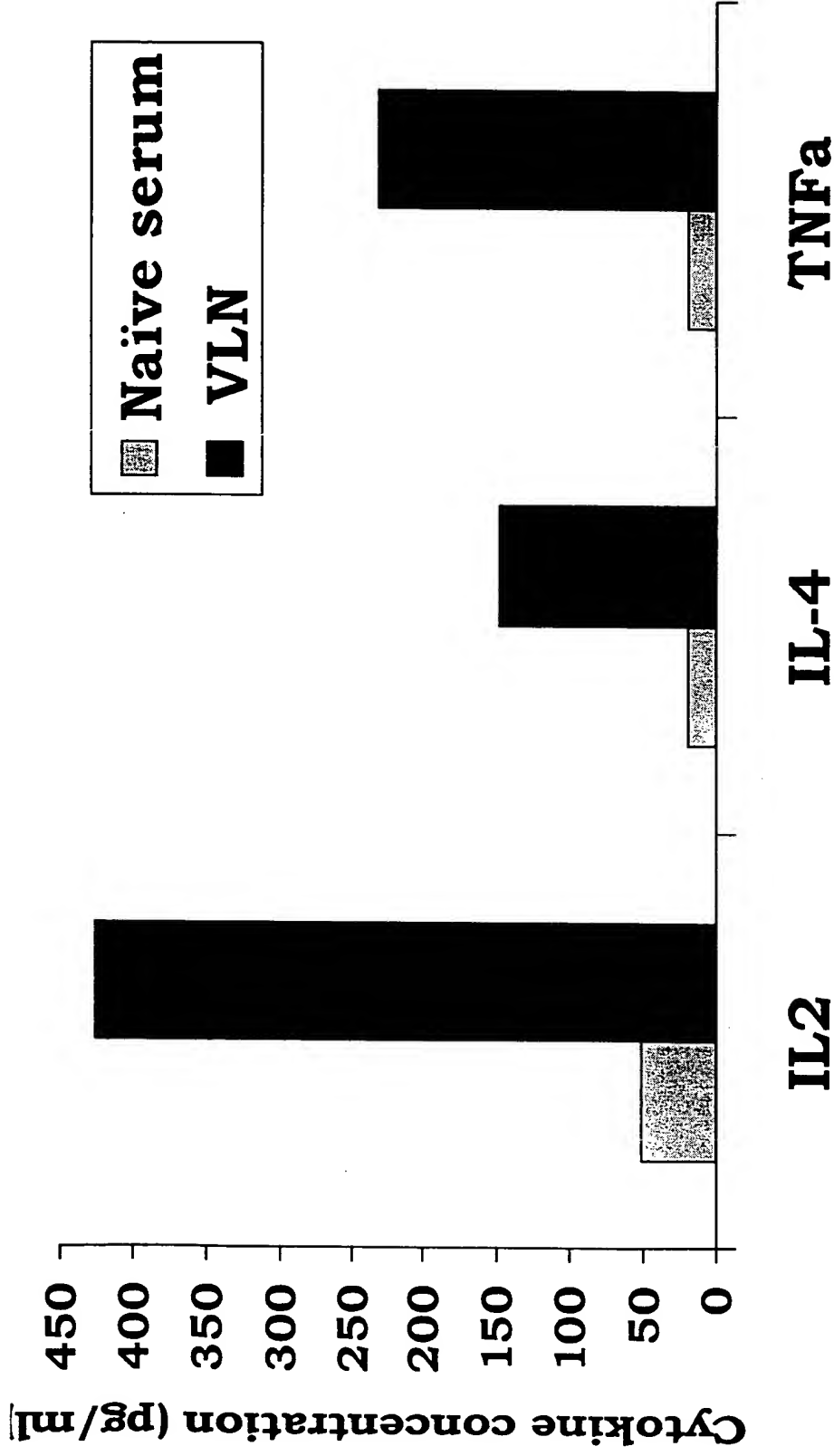
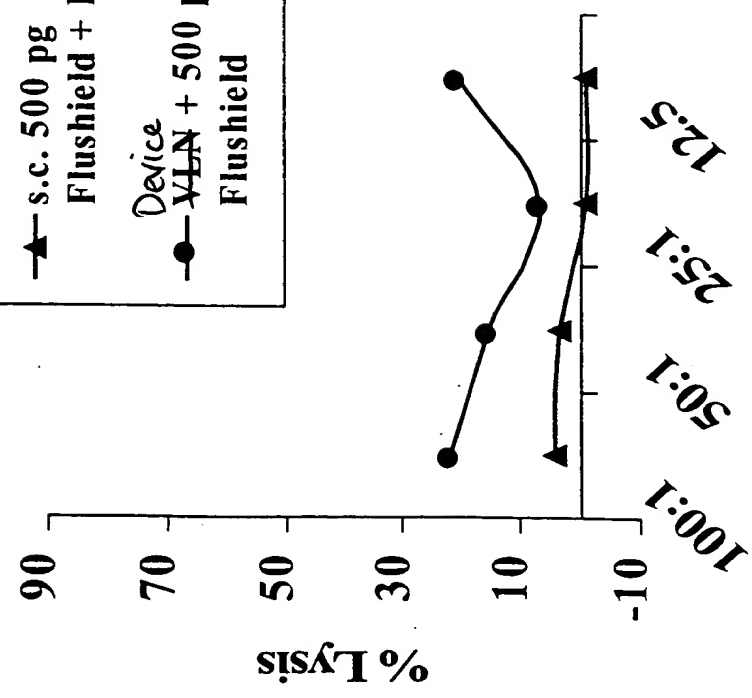
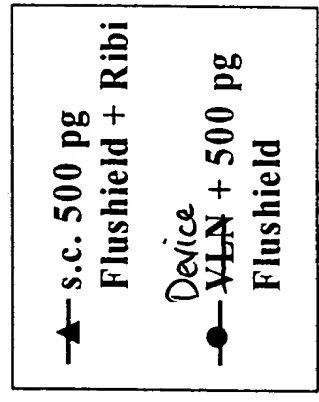


Figure 3- 20/24 20

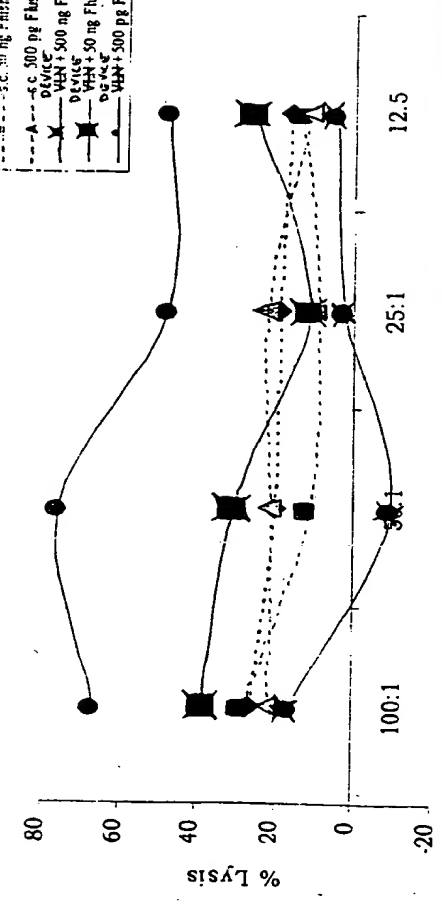
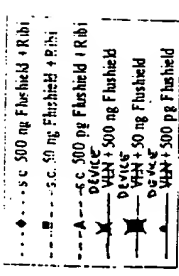
Device

VLN immunization Elicits Influenza-Specific CTLs



Non-infected Targets

Device Immunization elicited influenza-specific CTLs capable of lysing PR8-infected P1.HTR target cells in-vitro



PR8-infected P1.HTR target cells

Humoral response to influenza following a single immunization with 50 ng of FluShield

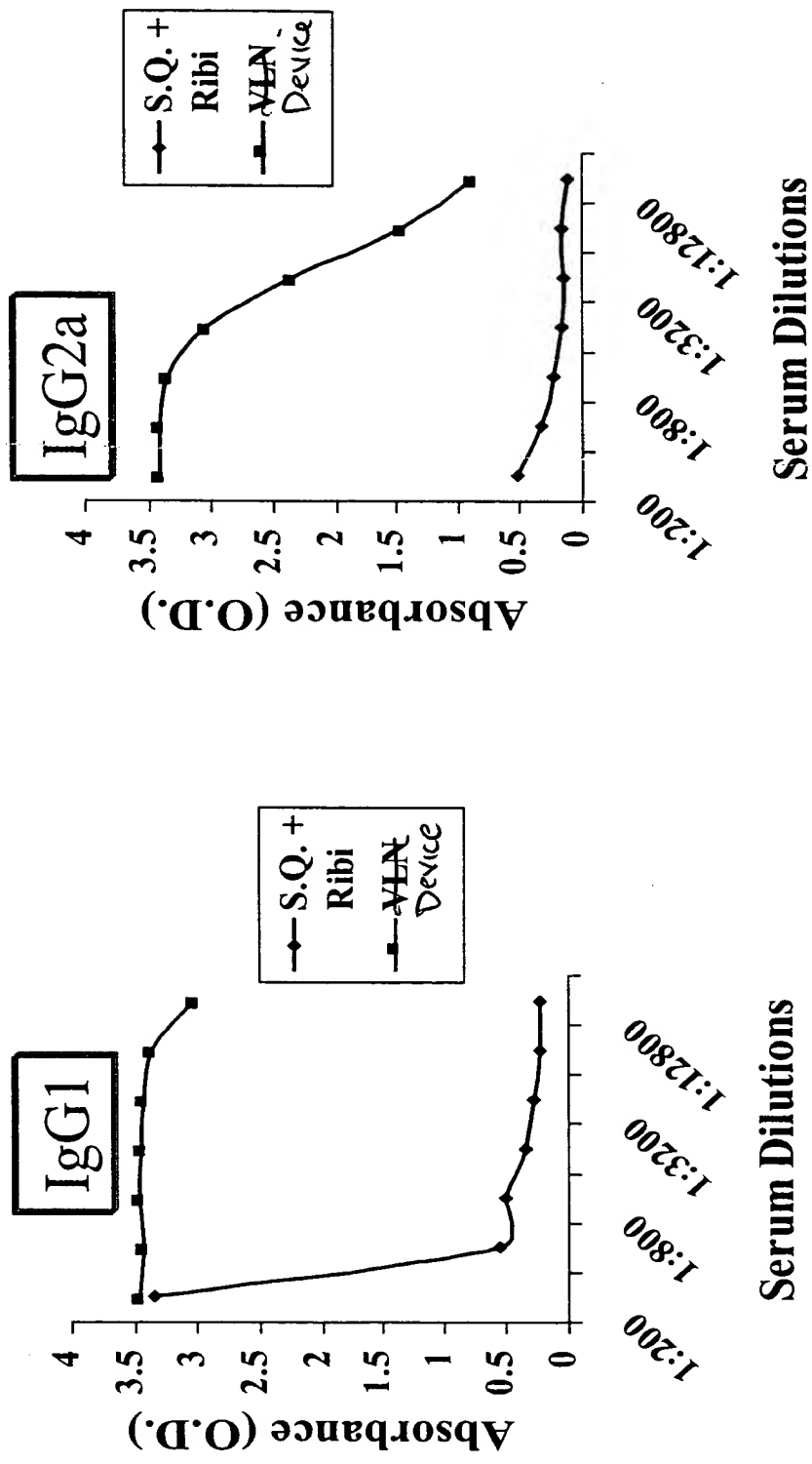
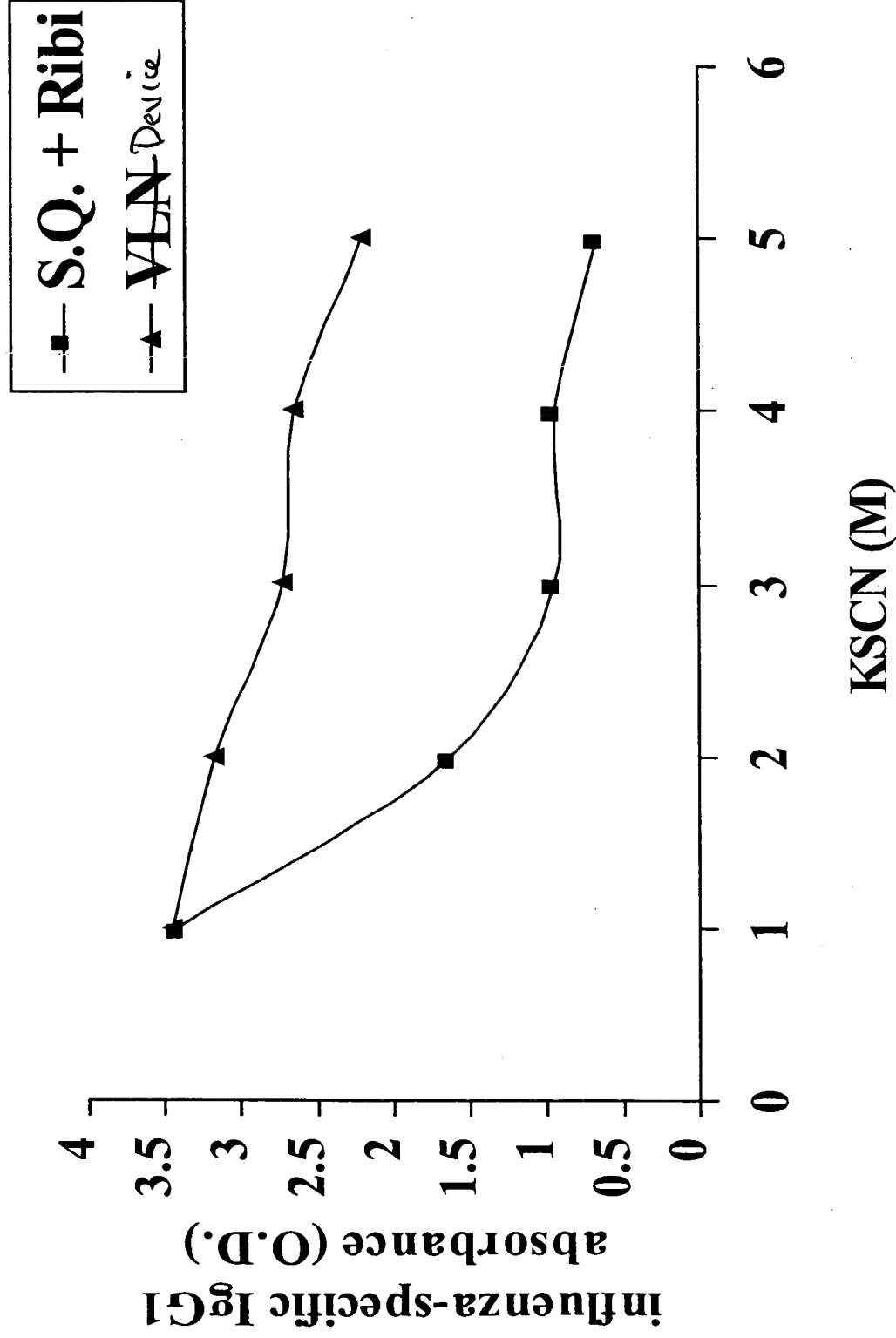


Figure 7a 22/2422

Relative Affinity Of Serum Antibodies Measured By KSCN Elution Assay



Immunization With FluShield Protects BALB/C Mice From Lethal Challenge With Influenza Virus

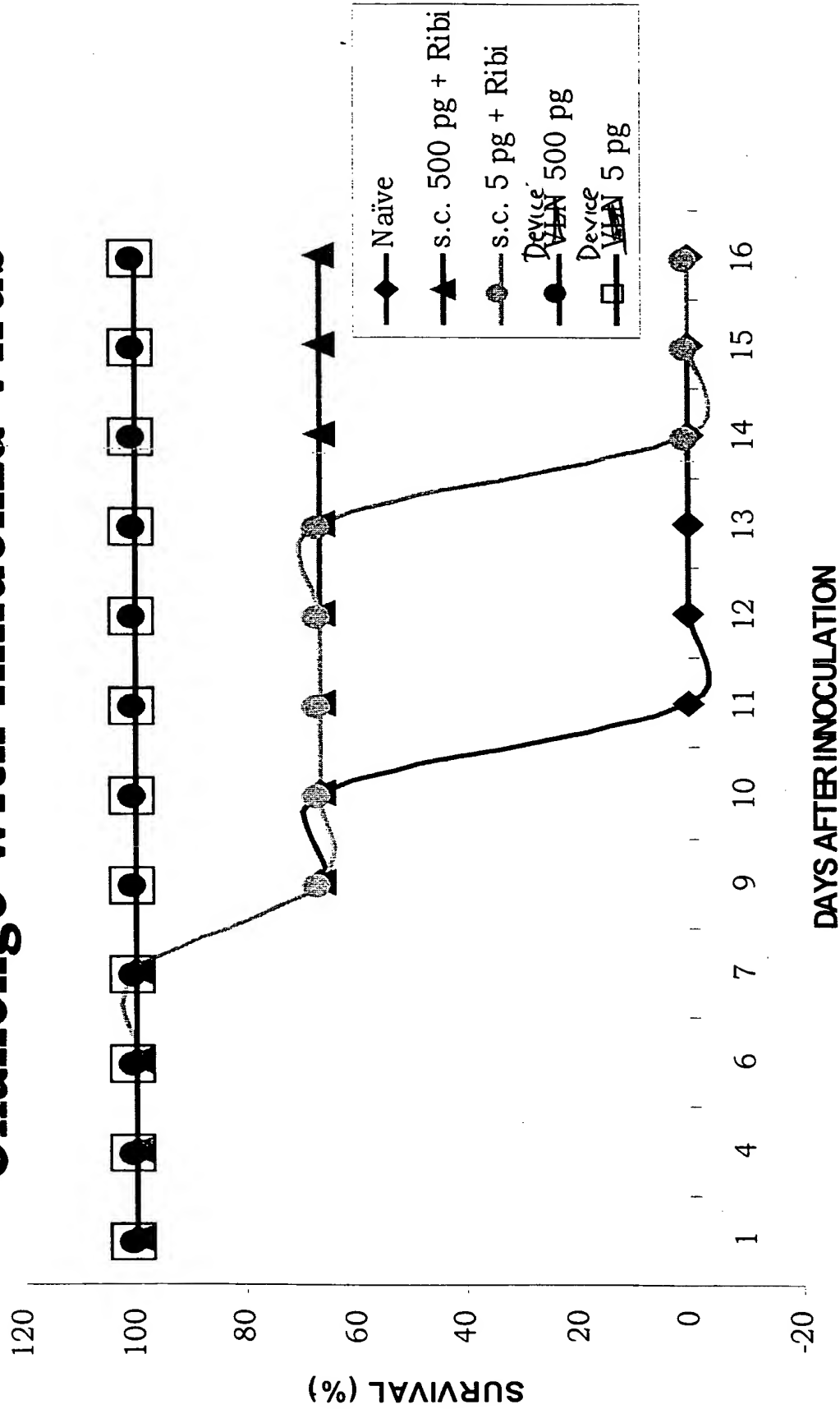
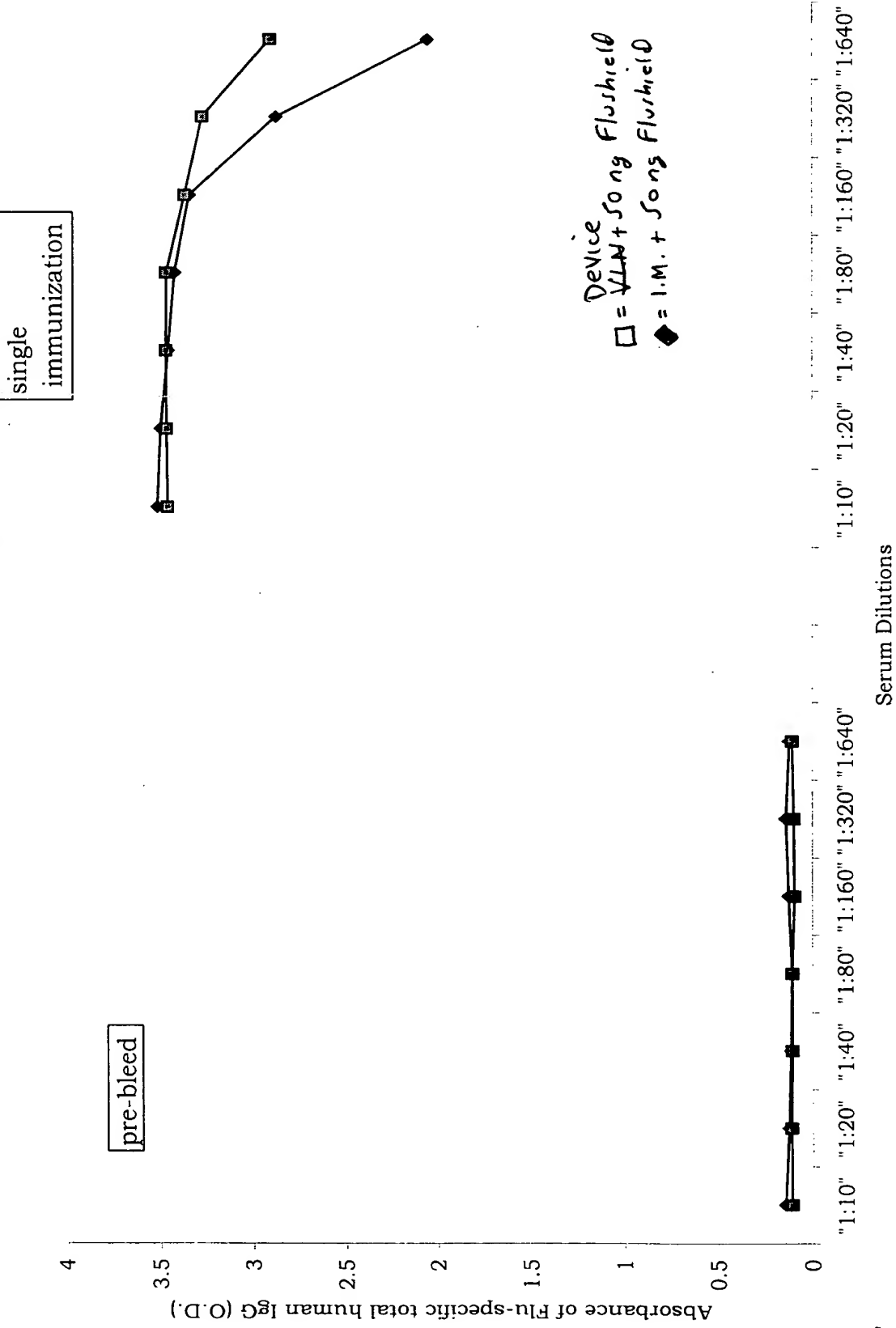


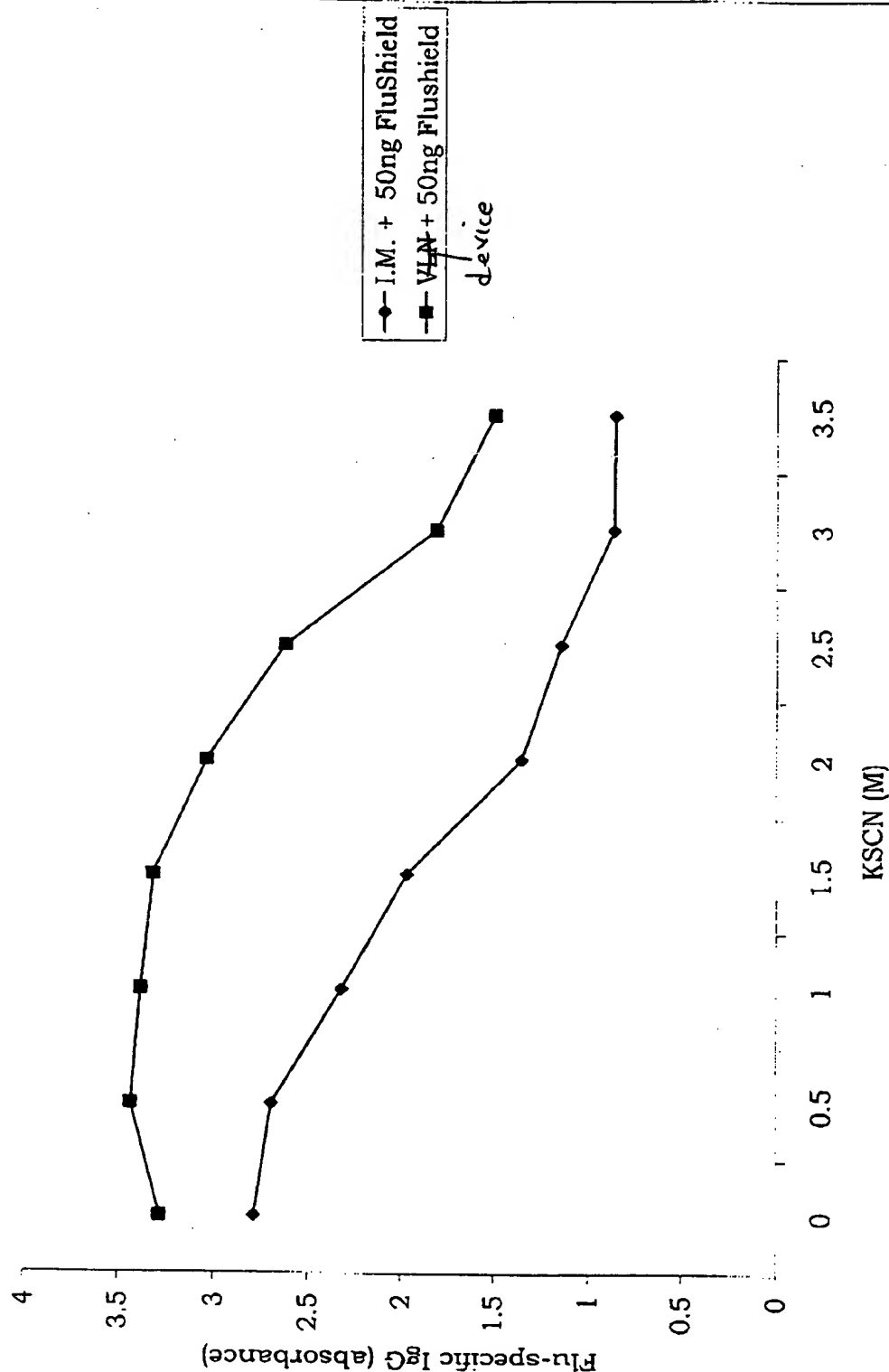
Figure 8 27/24 24

Flu-specific human IgG in serum of HuPBL-SCID Beige CD17 mice following
device VLN immunization with 50 ng FluShield

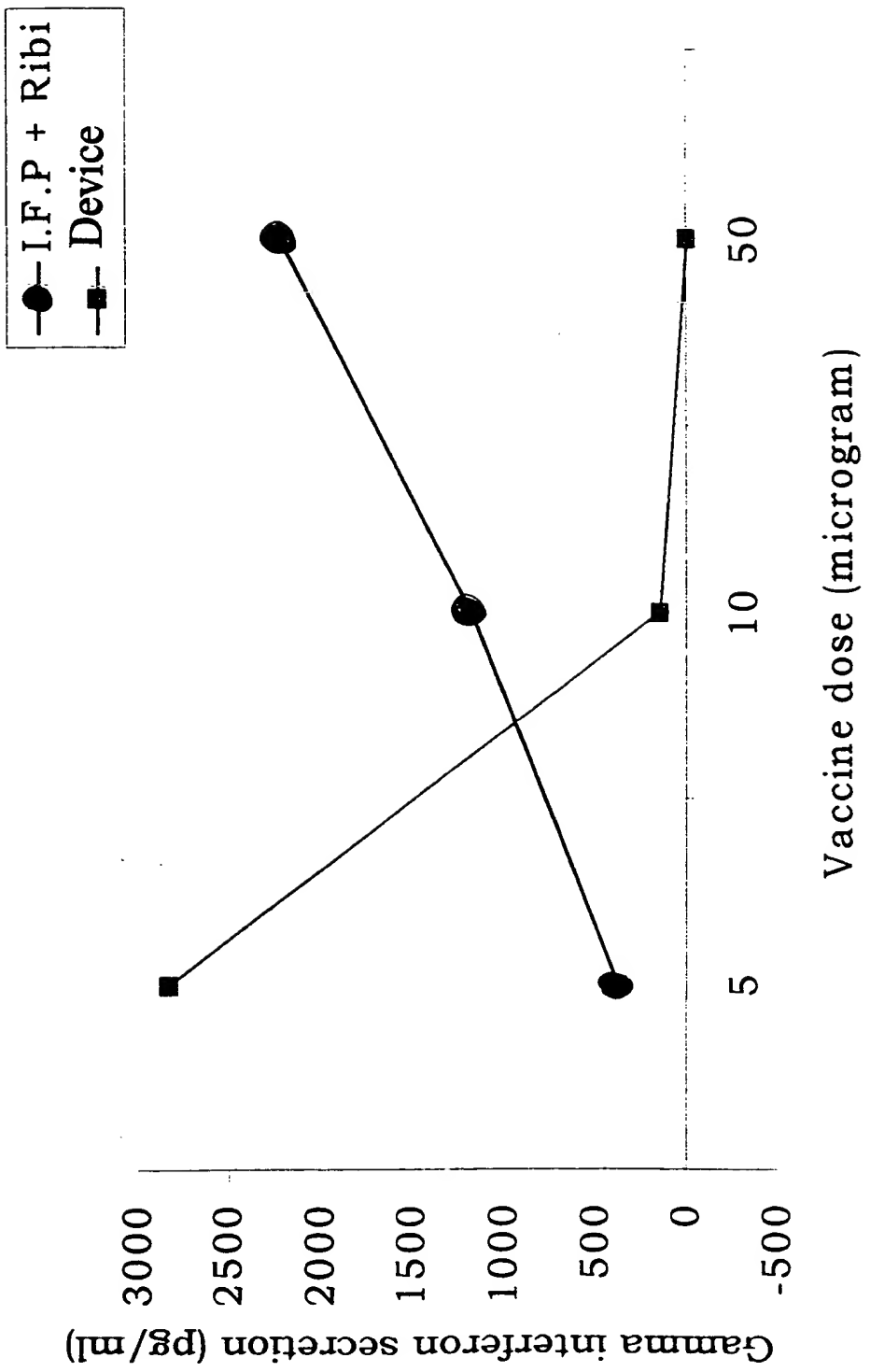


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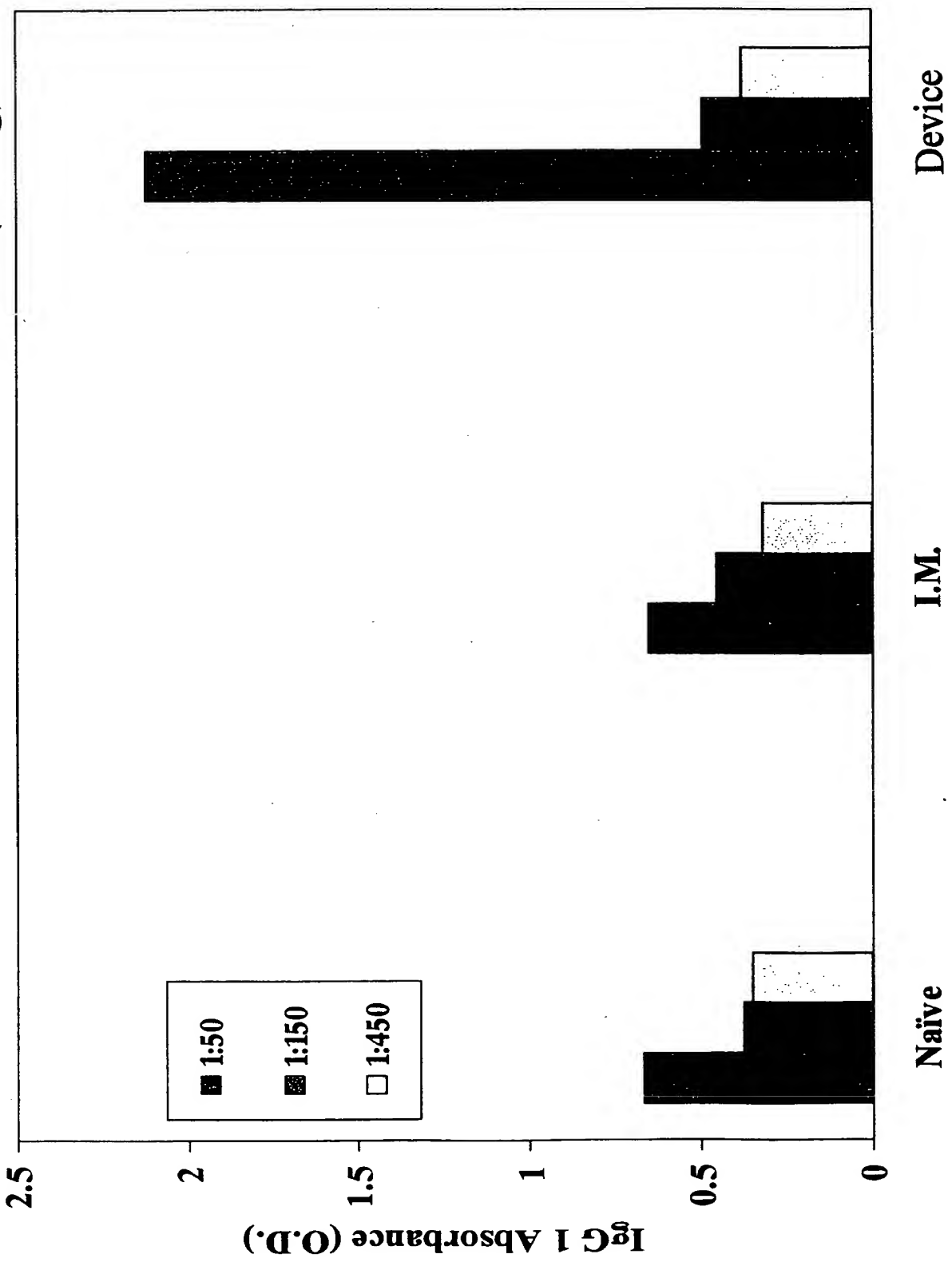
Relative affinity of human antibodies generated in SCID mice infused with human PBL following a single immunization



Higher amounts of ^{Antigen} ~~Antigen~~ in device switch off the Immune Response

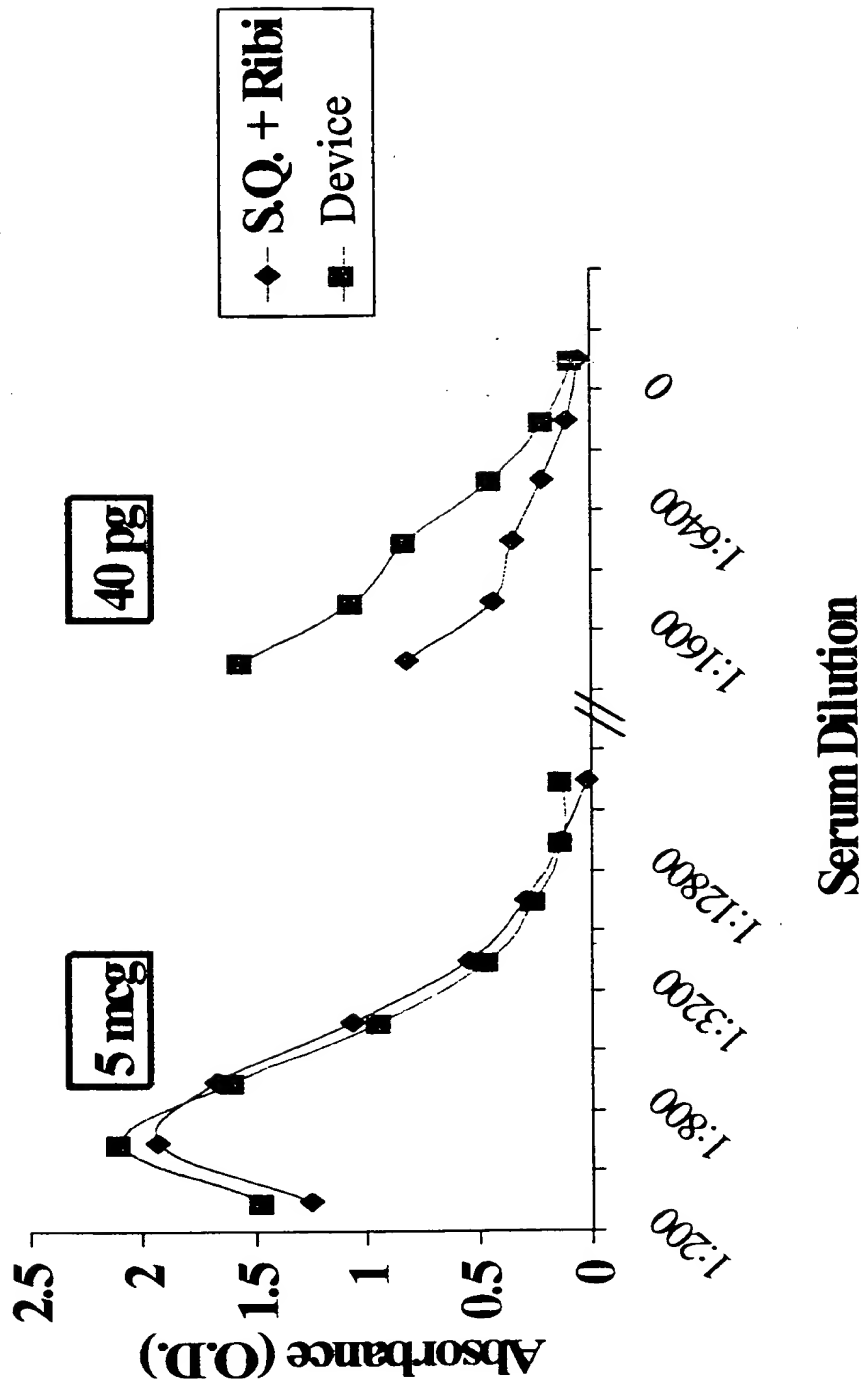


IgG1 Response to OV7 Antigen Following a Single Immunization With Plasmid DNA (50 ng)

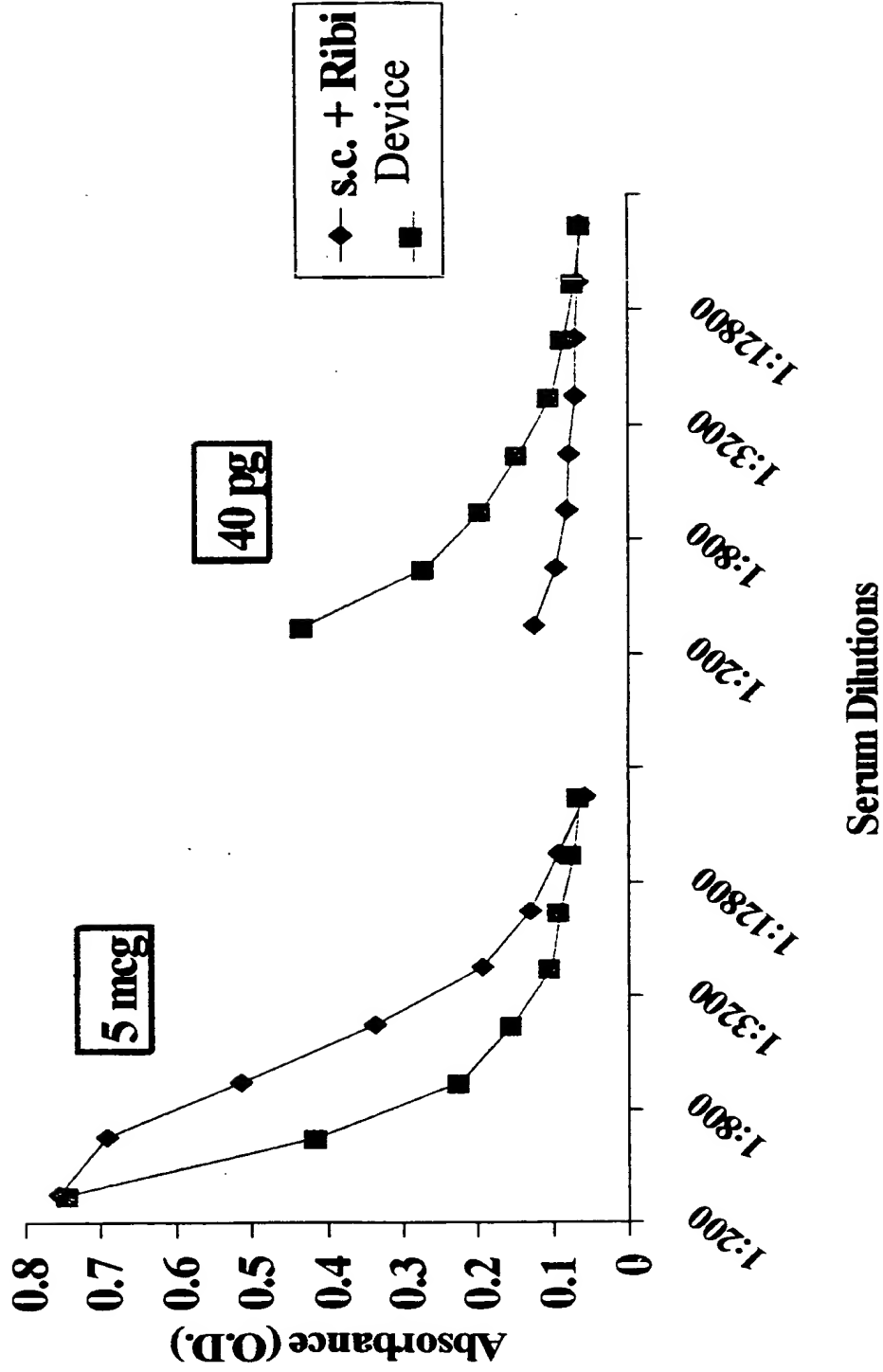


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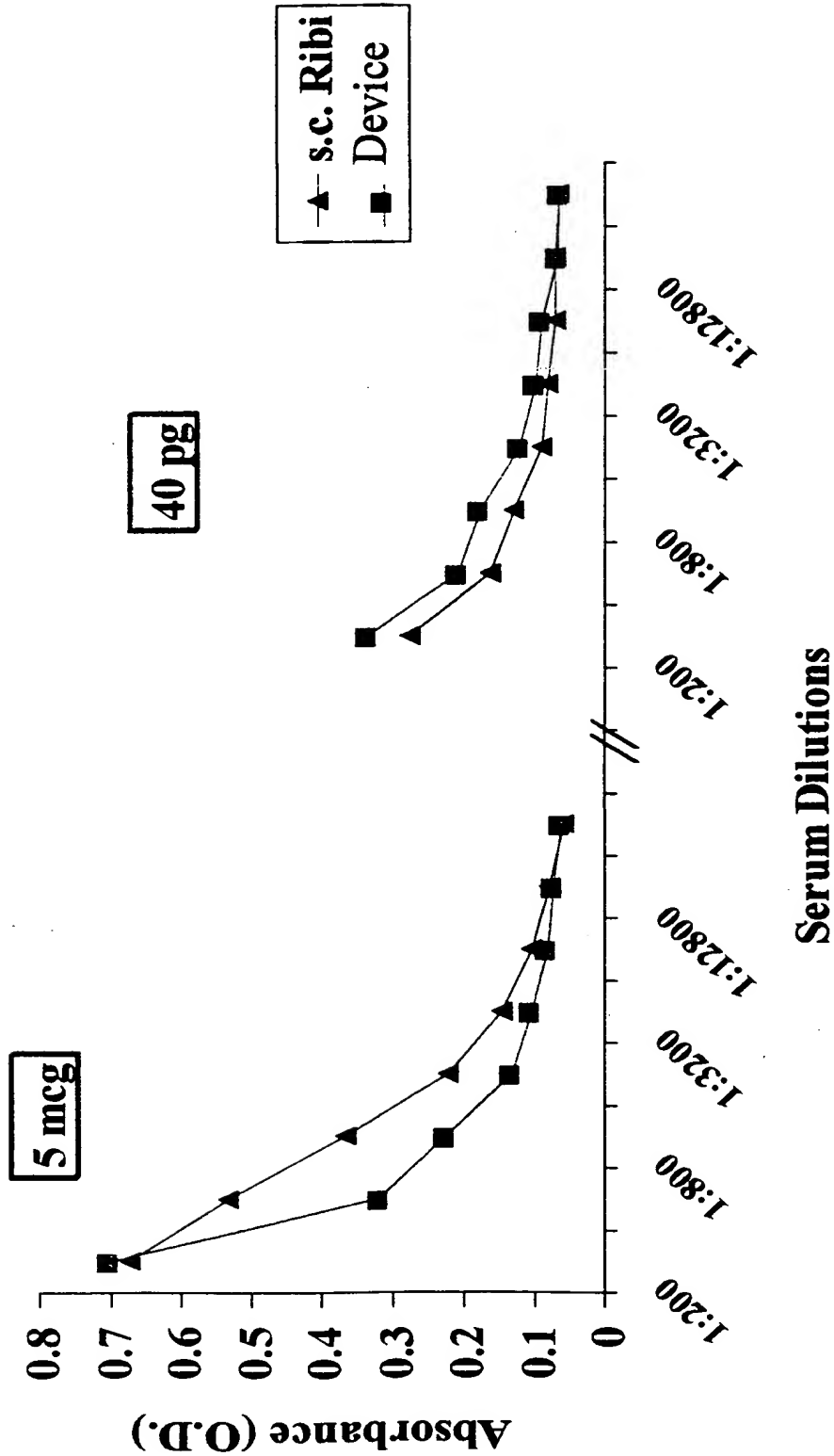
Total IgG Response to Pneumococcal Polysaccharides Following a Single Immunization



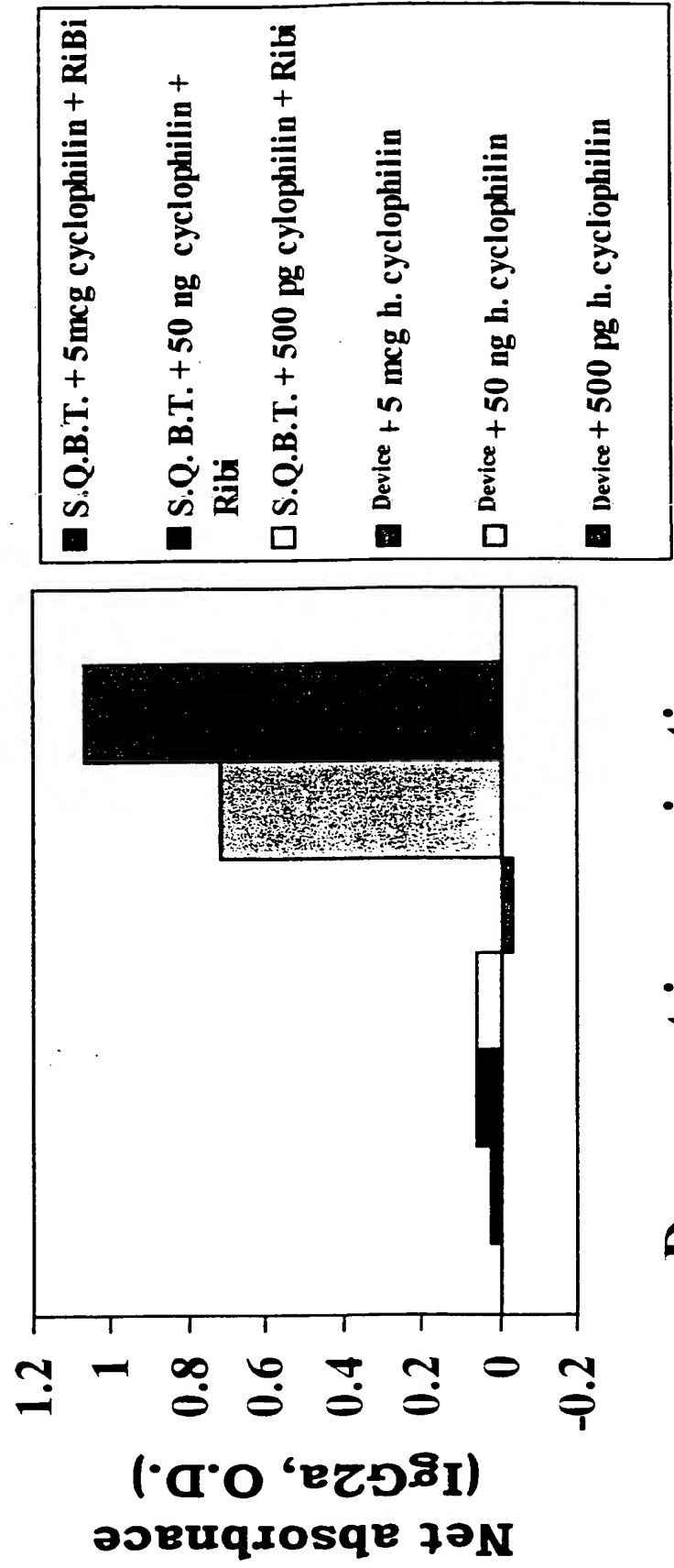
IgG1 Response to Pneumococcal Polysaccharides Following a Single Immunization



IgG2a Response to Pneumococcal Polysaccharides Following a Single Immunization

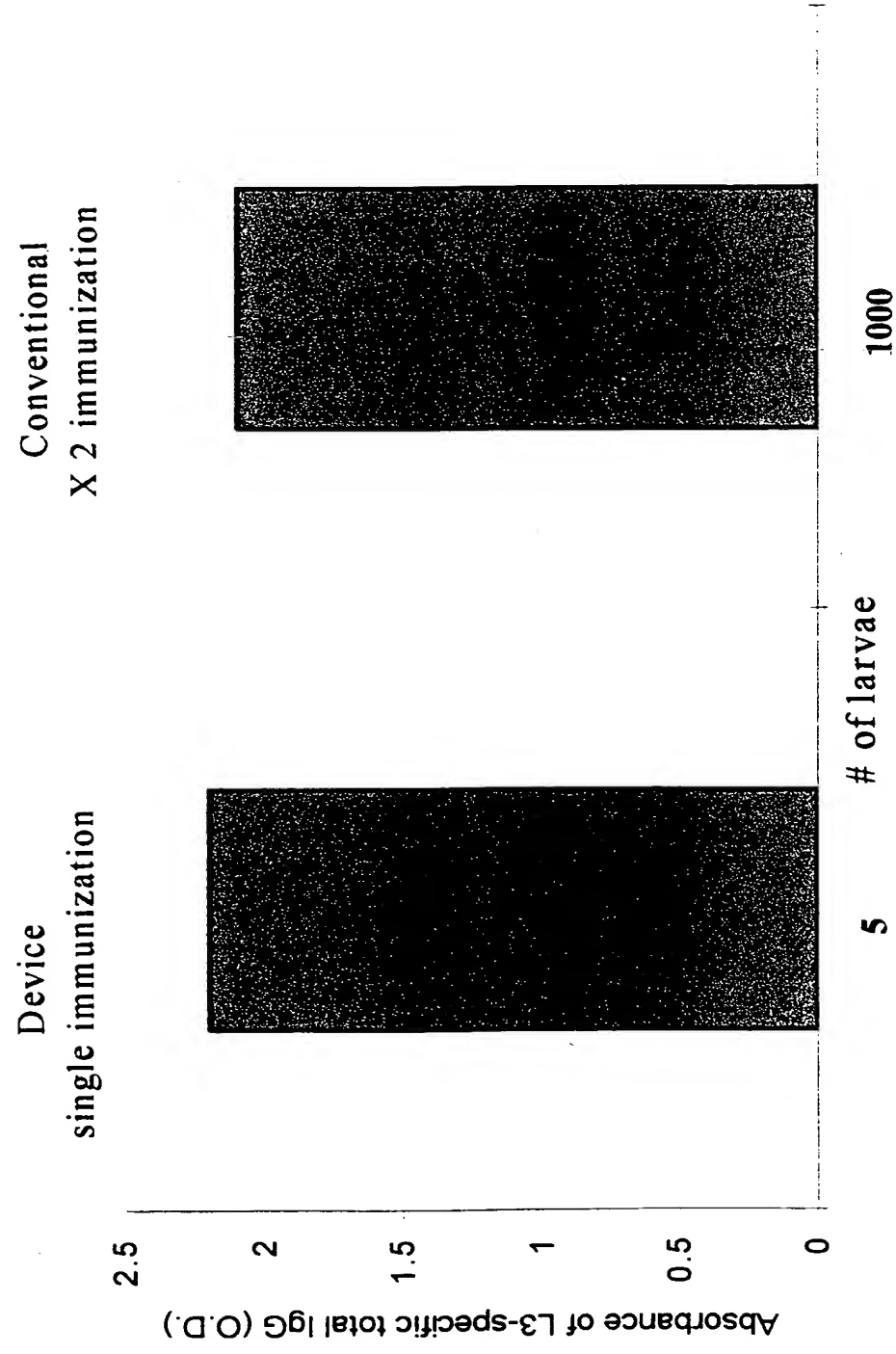


Induction of antibody response to highly conserved antigen (cyclophilin) following a single device immunization



Days post immunization

Hookworm-specific total IgG Following intra-device immunization with live larvae



24 36 35 36 34 33